

Box-Score of Value!

How"All Three" Low-Priced Cars
Compare on 25 Important Features
Found in Most High-Priced Cars

PLYMOUTH HAS 20

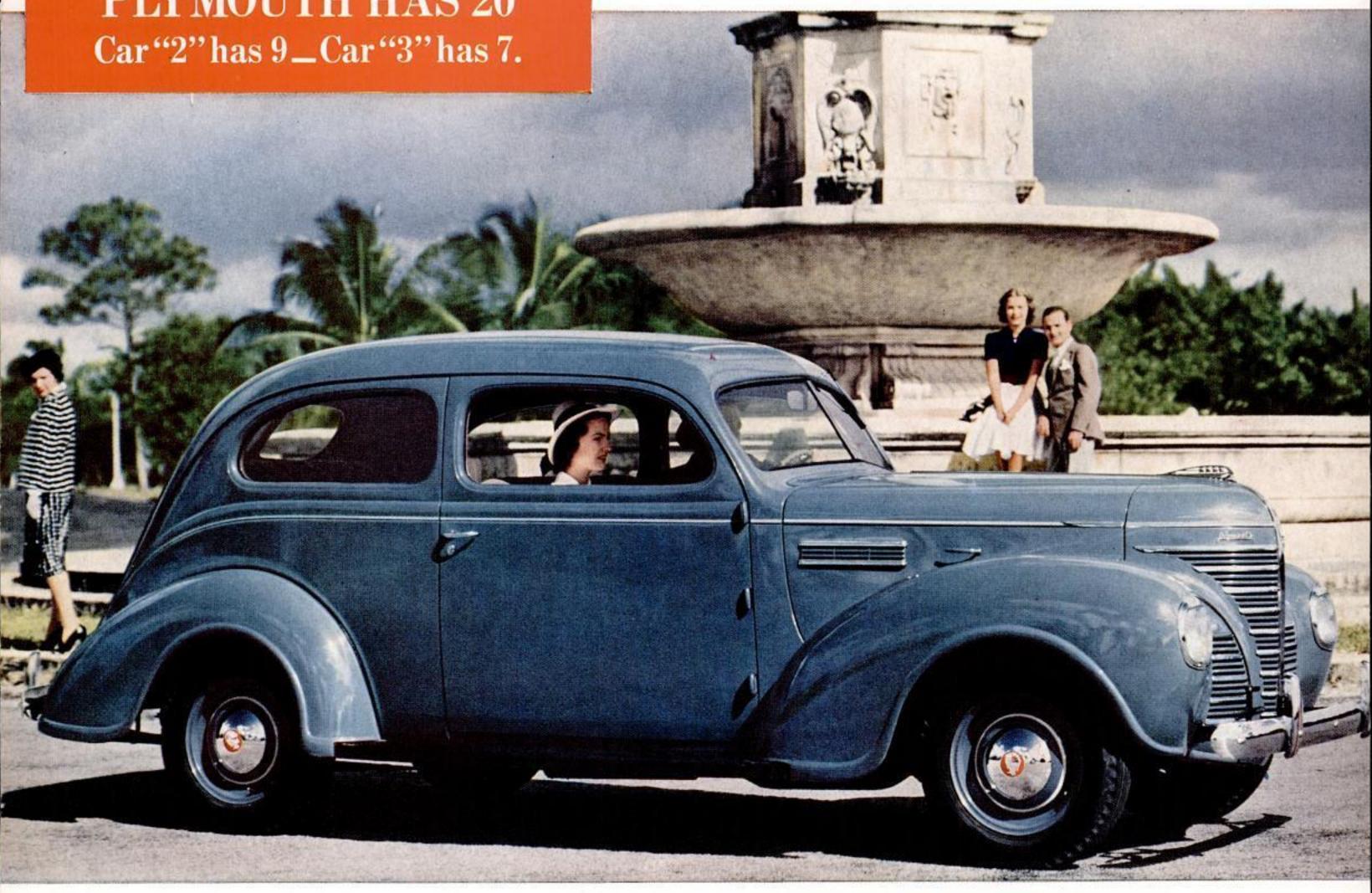
Car"2" has 9 Car"3" has 7

Manufacturers can be expected to put the highest quality of engineering, the finest features, into their highest-priced cars.

And while high-priced cars are not identical, they do resemble each other on 25 important features.

But Plymouth alone among "All Three" low-priced cars gives you the majority of these quality features... more, in fact, than the "other two" low-priced cars combined!

No wonder Plymouth has grown faster than any other car in history!



It's NEVER BEEN more evident...Plymouth is the one low-priced car that's most like the high-priced cars!

Here are a few of the 25 big features common to most high-priced cars...

ALL-SILENT TRANSMISSION

"L-Head" Engine

X-Braced Frame

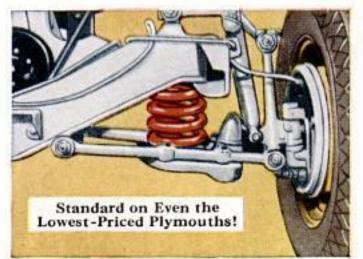
FOUR RINGS PER PISTON

Your Plymouth dealer will gladly show

you the complete list of features and explain their value. Out of a total of 25, the Plymouth "Roadking" has 20... and the De Luxe Plymouth has 24!

No wonder Plymouth is selling so fast ...this is the kind of quality people want! Plymouth Division of Chrysler Corporation, Detroit, Michigan.

(Right) Amola steel coil springs give Plymouth its marvelous riding smoothness.

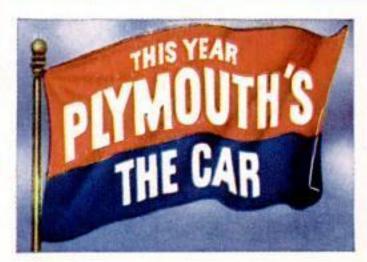


THIS BIG \$685

—DELIVERED IN DETROIT, including front and rear bumpers, bumperguards, spare wheel, tire and tube, foot control for headlight beam with indicator on dash, ash-tray front and rear, sun visor, safety glass, big trunk space (19.3 cu. ft.). Plymouth prices include all federal taxes. Transportation and state, local taxes, if any, not included.

TUNE IN MAJOR BOWES' ORIGINAL AMATEUR HOUR, COLUMBIA NETWORK, THURS., 9-10 P. M., E.D. S.T.

PLYMOUTH BUILDS GREAT CARS THE "ROADKING" THE "DELUXE"



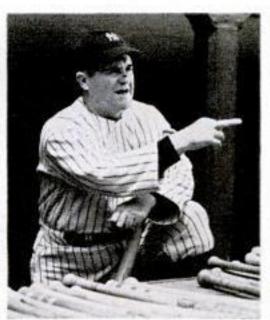
BASEBALL STRATEGISTS OF ALL TIME __ JOE MCCARTHY, MANAGER OF THE WORLD CHAMPION YANKEES, PILOTED HE NEW YORK TEAM TO 3 CONSECUTIVE WORLD SERIES VICTORIES



TRAINING CAMP, Florida. McCarthy works with each player...builds a co-ordinated team. (Above) Marse Joe, at the plate, tries a new pitcher.



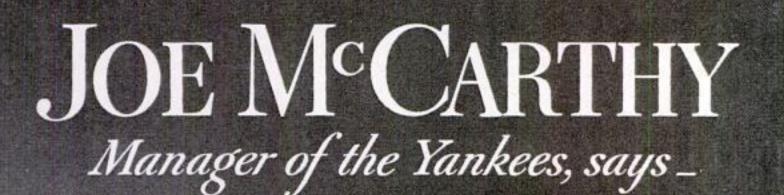
EAGLE-EYED behind the backstop, Joe watches the Yankee team go through its paces. "There's no letting up once the season starts," says pilot McCarthy.



MASTERMINDING from the dugout! "Can't miss a trick," adds Joe. "When a headache makes me nervous, Bromo-Seltzer helps me."



CONGRATULATIONS pour in on winning the 1938 World Series! McCarthy is the only manager to pilot a team to three successive world titles ... will he add a fourth this year?



PLENTY OF HEADACHES, **NERVOUS STRAIN** WHEN YOU'RE MANAGING A MAJOR-LEAGUE TEAM.LIKE MILLIONS OF OTHERS, I TAKE **BROMO-SELTZER**

"I relieve headache, jumpy nerves with Bromo-Seltzer"

> Headache strains your nerves. You feel jumpy, irritable, find it hard to concentrate, hard to co-ordinate. That's why headache is best treated with a remedy made to do at least 2 things . . . relieve pain and steady your nerves.

Bromo-Seltzer does both. Tests by a group of doctors have proved this.

Like Joe McCarthy, millions of busy, up-anddoing folks take Bromo-Seltzer for headache.* They like the quick relief it brings to pain . . . its extra help for tired, jumpy nerves.

Take Bromo-Seltzer next time your head aches. Right away it helps relieve the pain. Soon you're feeling steadier-more poised-less dragged down.

Keep Bromo-Seltzer at home always. Buy it at any drugstore-soda fountain.

*For frequently recurring or persistent headache, see your doctor. For the ordinary headache, take Bromo-Seltzer.

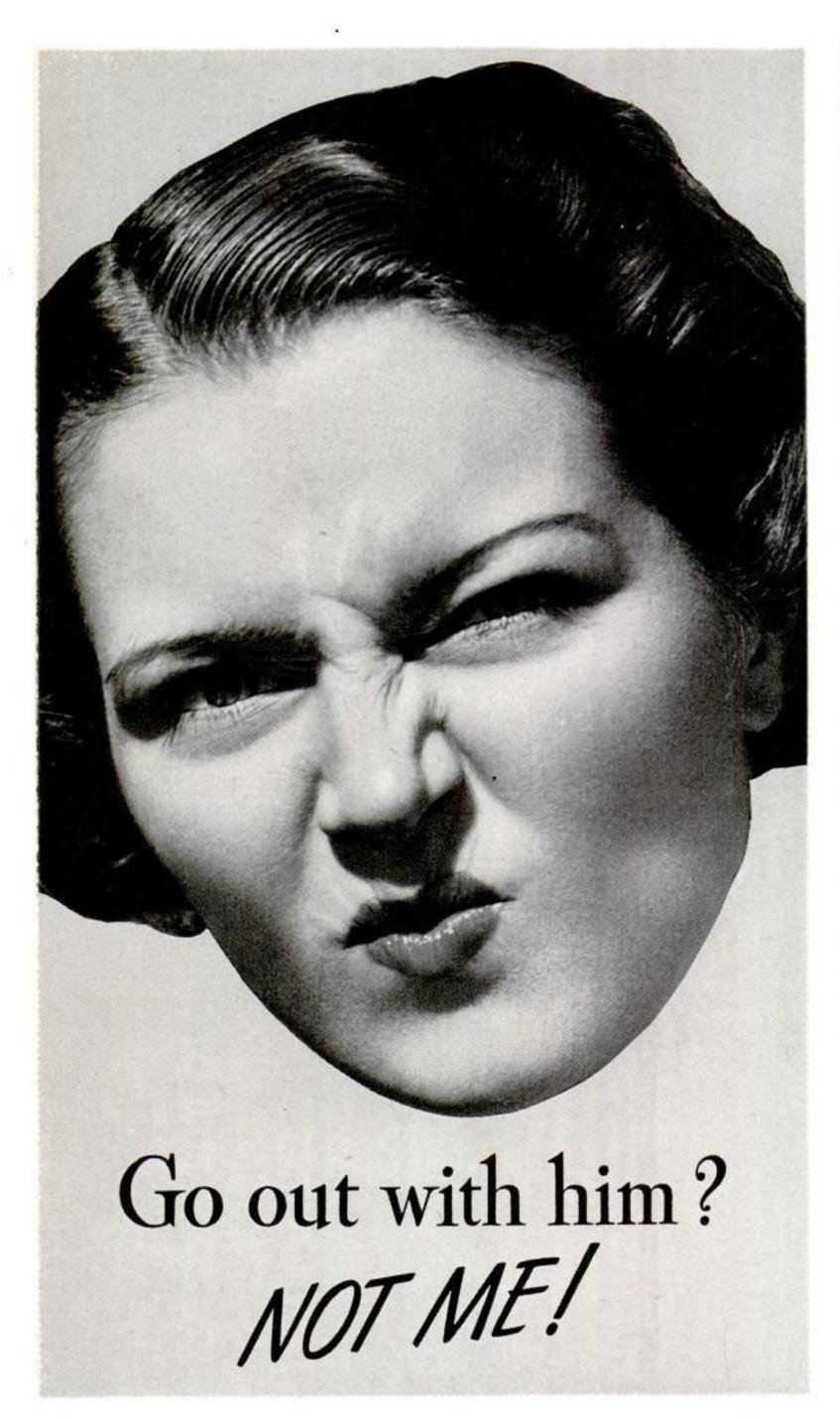


MANAGER McCARTHY keeps Bromo-Seltzer handy to relieve headaches. He says: "For years I've taken Bromo-Seltzer whenever my head aches. It's the most valuable headache remedy I've found —leaves me more alert."



When HEADACHE comes, think of your NERVES_take BROMO-SELTZER





THE thing that women simply loathe in men is the thing of which men are frequently guilty . . . halitosis (bad breath). It is the offense unpardonable, the bar to friendships, romance, and business relations. And men, according to women, are the worst offenders-so flagrant, in fact, that women write to ask that we do something about it in our advertising.

Well, gentlemen (we hope), here's a hint: The sensible, easy, delightful precaution against halitosis is Listerine Antiseptic, with its amazing antiseptic and deodorizing power. You

simply rinse the mouth with it morning and night, and between times before business or social engagements.

Listerine Antiseptic freshens and cleanses the entire mouth, quickly halts the fermentation of tiny food particles (a major cause of odors) and then overcomes the odors themselves. The breath becomes sweeter, purer, more wholesome, and agreeable. Next time, when you wish to ap-

pear at your best, don't take a chance. Use Listerine.

LAMBERT PHARMACAL Co. St. Louis, Mo.

LISTERINE ... checks Halitosis (Bad Breath)

P.S. IF YOU HAVE ANY EVIDENCE OF DANDRUFF USE LISTERINE. ITS RESULTS ARE AMAZING.

LETTERS TO THE EDITORS

Wiedemann and Princess Steffie

Sirs:

Your article on Captain Fritz Wiedemann (LIFE, June 26) was splendid. But I did detect one error. "Princess Steffie." who has made herself very useful to the Reich in past years, chiefly through her work in England, received the castle of Leopoldskron before the Munich pact.



WIEDEMANN & PRINCESS STEFFIE

for in August I attended a function of hers there, at which, incidentally, Wiedemann was present.

A point of interest about the Princess which you failed to bring out: although she is undoubtedly one of the most influential people in Germany, she is a Jewess. Another point: Wiedemann's being in the doghouse is due, partially, to the incident behind the following story which has been circulating persistently. One morning, soon after the November atrocities, he paid his customary visit to Hitler's office. After making his daily report, he did not leave but strode up and down the room in a silent fury. Finally the Führer asked him what was the matter. He walked over to where Hitler was sitting, took some photographs out of his pocket and flung them onto the desk. They were pictures, and very good ones. of aged Jews being beaten, of shattered glass from the windows of Jewish shopsin fact, almost a LIFElike picture story of what had happened. Then he walked out, presently found himself still walking until he got to San Francisco.

J. H. D. Jr.

Sirs:

Effective.

New York, N. Y.

I was very much interested in Mr. Sondern's mention of Princess Steffie, and it might interest you to know that Princess Stéphanie Hohenlohe was born in Vienna, her maiden name was Steffie Richter and she was a Jewess. I knew her when she started her life, going to Monte Carlo, knowing lots of people etc. I lost sight of her, but now read her very interesting life and recognized her picture at once.

I don't sign this letter because I don't want to be involved with anything, and even don't want to hurt her, but I thought it might interest you.

A FAITHFUL READER OF LIFE New York, N.Y.

 Since the authors of the two letters above probably have reasons for not giving their names LIFE breaks its rule against publishing unsigned letters.

J. H. D. Jr. is right about the castle having been given Princess Stéphanie before Munich. LIFE is unable to verify the report, common in Germany, that one or both of the princess' parents were Jewish.-ED.

Sirs:

I was intensely interested in your article on Wiedemann and while reading it I thought of something in connection with his family's social life that may interest your readers.

I have a young Jewish boy friend who is a member of the same Boy Scout troop, who made friends with the young Wiedemann boy immediately after he arrived. The Jewish boy saw to it that the boy met many young fellows his own age, learned some of the fundamental idiom for use in conversation, and became acquainted with our customs. Young Eduard Wiedemann and the Jewish boy are the closest of friends now and any socalled race distinction or prejudice between the two has never been displayed.

JOHN F. BOUCHER

San Mateo, Calif.

Sirs:

I congratulate you for your splendid presentation of the activities which surround the work of Hitler's "Captain Fritz." Your recognition of facts as isolated facts without the usual whitewash is highly commendable. However, your work has only begun. It is your duty as an events magazine to keep the people of the United States posted on the "progress' of Wiedemann, Princess Stéphanie (both before and when she arrives) and other such representatives of movements that aim to guide the future of the American people.

FRED D. LAWRASON

St. Paul, Minn.

Sandlot Method

Sirs:

In all of my sandlot baseball experience, I have never used the method of choosing sides that Wagner and Collins used in choosing sides at Cooperstown. I am referring to the picture on page 19 of (continued on page 4)



WAGNER AND COLLINS

YOUR ADDRESS?

IS the address to which this copy of LIFE was mailed correct for all near future issues? If not, please fill in this coupon and mail it to LIFE, 330 E. 22nd Street, Chicago, Illinois. my mailing address for LIFE will be:

NEW ADDRESS	Name	PLEASE PRINT
	Address	
	City	State
OLD ADDRESS	Address	
	City	State

GEE, IS MY DADDY SMART! GEE, ... I listened in and heard how he bought

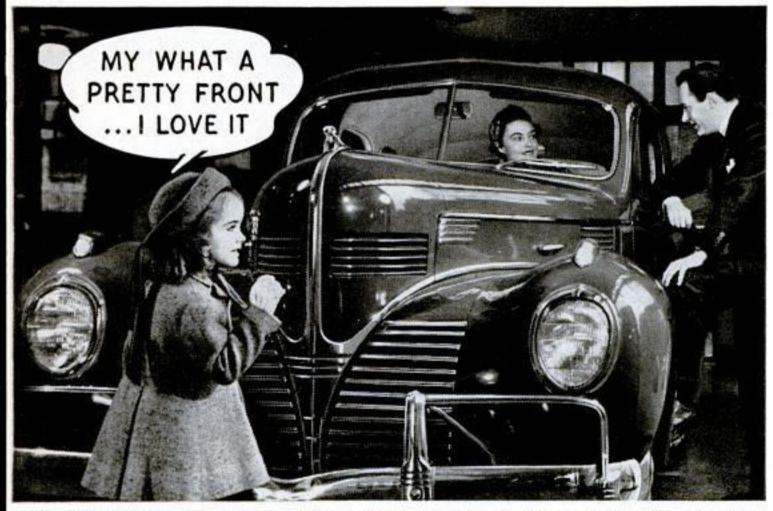
... I listened in and heard how he bought a great big car and saved money, too!"



THINK OF IT! The new Dodge has a longer wheelbase...a 4-inch wider windshield with 23% more safety glass area...the widest front seat Dodge ever built...and a front compartment that is absolutely free of old knee-knocking shift rod and hand brake!



THERE'S CERTAINLY LOADS OF ROOM! Here's a luggage compartment with actually 27% more space! No "trunk hump" outside either, for this luggage compartment is completely concealed beneath windstreamed rear ensemble!



YOU'LL LOVE IT, TOO!—the distinctive front end that helps make this big Luxury Liner the most beautiful car Dodge ever built! Headlights, windstreamed in fenders, add to the beauty of line, and contribute to greater safety while driving at night!



A "SWELL BUY" IS RIGHT—any way you look at it! With all its extra size, new engineering ideas and famous gas and oil economy, the new Dodge Luxury Liner costs even less than last year's Dodge—actually only a few dollars more than a small car!

Go to your Dodge Dealer and TAKE ALOOK ...THAT'S ALL DODGE ASKS!

You don't have to trust to guesswork when you select your new car the convincing Dodge way. And you don't have to take anyone's say-so. Instead, you are the judge and jury! You get all the facts—and then decide what car gives you most for your money!

But why postpone the decision? There's no better time than now to go to your Dodge Dealer and take a look at this big, handsome Luxury Liner and all it has to offer! Take a look at its host of new ideas—new gearshift at the steering wheel at no extra cost...new headlights in front fenders...new "Safety Light" speedometer...new invisible luggage compartment, 27% larger!

And for day-in-and-day-out savings, take a look at the famous Dodge "Scotch Dynamite" Engine. It not only gives you every one of the proven Dodge economy features, but offers even more money-saving advantages for 1939!

The price? That's the most welcome surprise of all. This bigger, finer Dodge sells for just a few dollars more than a small car! And you can buy on convenient budget terms from your nearby Dodge Dealer.

Tune in on the Major Bowes Original Amateur Hour, Columbia Network, Every Thursday, 9 to 10 P. M., E. D. S. T.



BUY THE NEW 1939 DODGE AND SAVE MONEY

Girl is to the young men of today what the Gibson Girl was to their fathers is an insult to a fine, pure lady. The Gibson Girl represented all that was noble and lovely in Woman. She should not be mentioned in the same breath with that strumpet.

GEORGE L. BENSON Boston, Mass.



THE TARZAN FAMILY

Tarzan's Sneakers

Sirs:

Jeepers, creepers, where'd he get them sneakers? All the comforts of home!

ALICE GLORIA

Beverly Hills, Calif.

 Metro-Goldwyn-Mayer cannot imagine how their Tarzan (LIFE, June 26, see cut) got the sneakers.—ED.

Knots

Sirs:

Gad! It is enough to make an old salt head for deep water again, seeing that phrase, "20 knots an hour." You know as well as the rest of us that a knot is a term of speed. A knot means a nautical mile an hour.

PERRY DUNCAN

Portland, Ore.

 Webster approves "knots an hour" but LIFE will hereafter respect nautical usage.-ED.

On Reading Magazines

Sirs:

Many years ago (I would rather not say how many) I used to read LIFE when it was about the size of this paper I am writing on, and about as thick as the ham in a Sunday School Picnic sandwich. I used to read it from cover to cover each week and then cut out the best pictures and frame them.

Please allow me to congratulate you on your present size and make-up. The photographic excellence of your pictures is the best I have ever seen.

People, as you have no doubt found out, read magazines for various reasons -not all the same by any means. I recently made a few inquiries among my friends and was really surprised at the result. One said that he subscribed to a certain magazine only in cold weather as it was very useful to start a fire in the furnace. Another said that he subscribed to another magazine because it always had two or three hot stories where the red-headed heroine always got her man (either by the marriage-license route or a pearl-handled Smith and Wesson). Another one said that he subscribed to a certain magazine published somewhere in Pennsylvania (a rather large one, too) as the editorials always put him to sleep, especially when read at night.

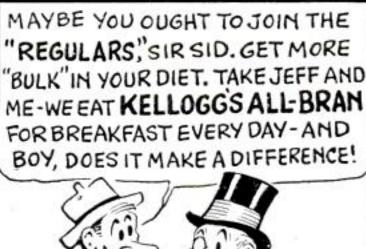
Citizens Savings Bank & Trust Co.

FRANK J. JULIENNE

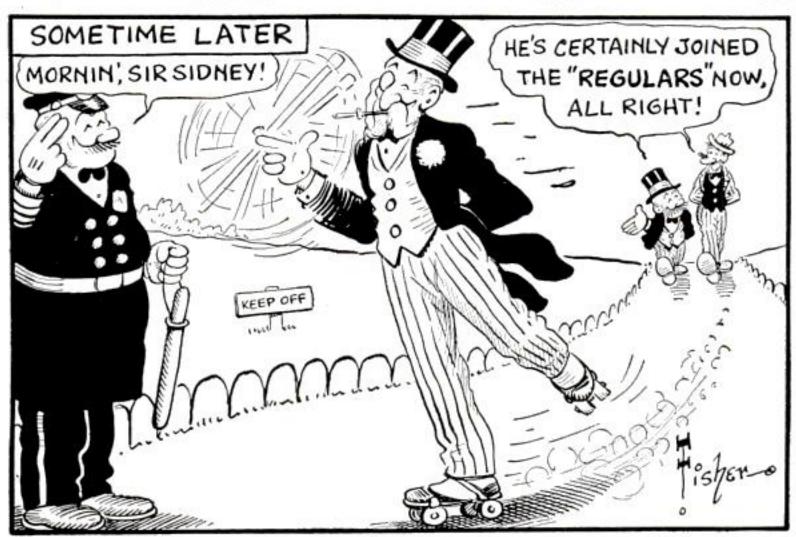
Jackson, Miss.





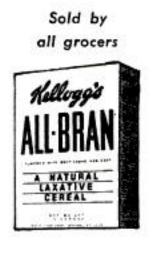








S there a better way to correct consti-L pation than just bearing it first and trying to cure it later? There is, if it's the common kind due to lack of "bulk" in the diet. Get at the cause and prevent the trouble, with that crisp, crunchy, bulk-rich cereal - Kellogg's All-Bran. Eat it every day, drink plenty of water, and see if the world isn't brighter!



Join the "Regulars" with **KELLOGG'S ALL-BRAN** Sirs:

Tsk tsk. When two oldtime ball players like Wagner and Collins choose up sides in the sandlot way and do it wrong, it's time to appoint two other captains. HERBERT REDER

LIFE, June 26. Wagner's right hand

must have been taken from the space

above Collins' right hand. Thus, Wagner's

hands must have been placed together,

which isn't the way we generally did it.

Had they done it right, Collins would

have had his hand on the top. He should

protest the game—he has been "gypped."

What's that wide open space of bat between Eddie Collins' right hand and

ELIZABETH SEEGER

Honus Wagner's left hand for?

FRED W. FOX

Dorchester, Mass.

Port Jefferson, Ohio

Sarajevo

Sirs:

May I compliment you on that remarkable picture layout on the aftermath of Sarajevo (LIFE June 26)?

I think that the finest piece of craftsmanship of its kind I have ever seen.

JOHN W. McGREEVY Dallas, Tex.

Appledore and Hollyhocks

Sirs:

You American journalists are incomprehensible to any ordinary Englishman. In LIFE June 19, you have a caption:-"Mrs. Woodrow Wilson, whose late husband won a war for the King's father." Only a few hundred thousand American troops managed to reach France by 1918 and they took part in the closing months of the war in a few minor engagements in which, owing to insufficient training, far too many lives were lost in proportion to the size of the affair.

CHARLES TEMPLE

Appledore Oxfordshire, England

Sirs:

This is often referred to as the age of youth, and youth in its proper sphere is unquestionably a charming and estimable thing, but not when it is so long maintained that it becomes merely arrested development. I, an American living abroad (from no unpatriotic motive), feel very keenly that the time has come for America to assume an adult status, with the poise and good manners that one has a right to expect from an adult. But I can find only ignorance and callow immaturity in such remarks as your comment under the picture of Mrs. Woodrow Wilson.

ELIZABETH BUSH

Hollyhocks Radlett, Hertfordshire, England

 More than 2,000,000 American soldiers served overseas. The Encyclopedia Britannica lists "13 major offensives" in which they participated. Captain B. H. Liddell Hart, England's most eminent military authority, says in The Real War: "The United States did not win the war, but without their economic aid to ease the strain, without the arrival of their troops to turn the numerical balance, and, above all, without the moral tonic which their coming gave, victory would have been impossible." -ED.

Petty Girl

Sirs:

In your June 26 issue of LIFE, you say that "wherever men must live alone" the Petty Girl appears on their walls. You overlook her many feminine admirers.

I have a collection of Petty Girls which I am constantly enlarging.

ANN LITTON ROWLAND Louisville, Ky.



SPEAKING OF PICTURES ...THE NAVY ROUNDS THE HORN

To sailors the world over, "rounding the Horn" conjures up memories of helpless sailing ships caught in merciless gales off Cape Horn, southernmost tip of South America, 200 miles north of the antarctic ice pack. Here some of the wildest weather in the world prevails. A calm, clear day is a news event (LIFE, Feb. 27). On the average, gales blow 70 days out of the year. During spring (September, October, November), high winds roar for 24 days out of a possible 91.

To save time going around the Cape, modern skippers generally use the Strait of Magellan to the north. But here the weather can be equally bad. As is shown by these vivid pictures of 10,000-ton U.S. cruisers caught in a storm as they headed for the Atlantic end of the Strait, a gale is just as fierce as one off the Horn. These storms, called "pamperos," are caused when cold air, sweeping down from the Andes, meets warm winds over the pampas of Argentina. At the Pacific end of the Strait the weather is even worse. Torrential downpours are created there when rain-filled ocean winds precipitate their moisture as they seek to rise above the Andes. That most sailors should refer to a passage through the Strait as "rounding the Horn" is understandable.

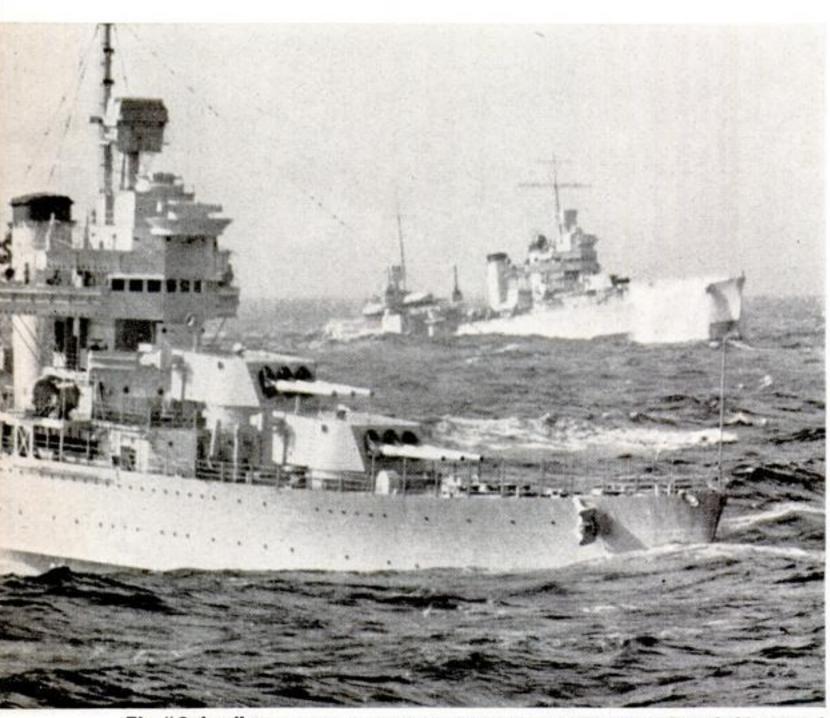
For 24 hours the sea raged in a 50-mile gale. Standing on the bridge of the U.S.S. San Francisco, Bonney Powell of Movietone News had to perform like a tightrope walker to keep his balance. It was so rough that over half the sailors were seasick. Food could not be served at the mess and the men could not sleep in their bunks. Rarely have the Navy's "all-weather" ships had to ride out such a blast.



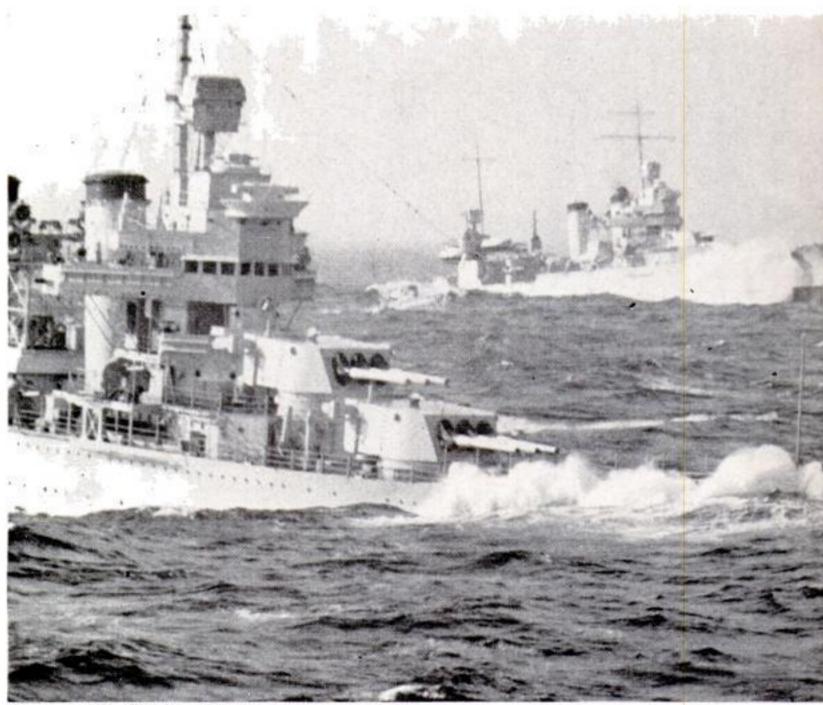
A GIANT WAVE, 50-FT. HIGH, BEGINS TO ROLL OFF THE STARBOARD SIDE OF THE U.S. CRUISER "QUINCY"



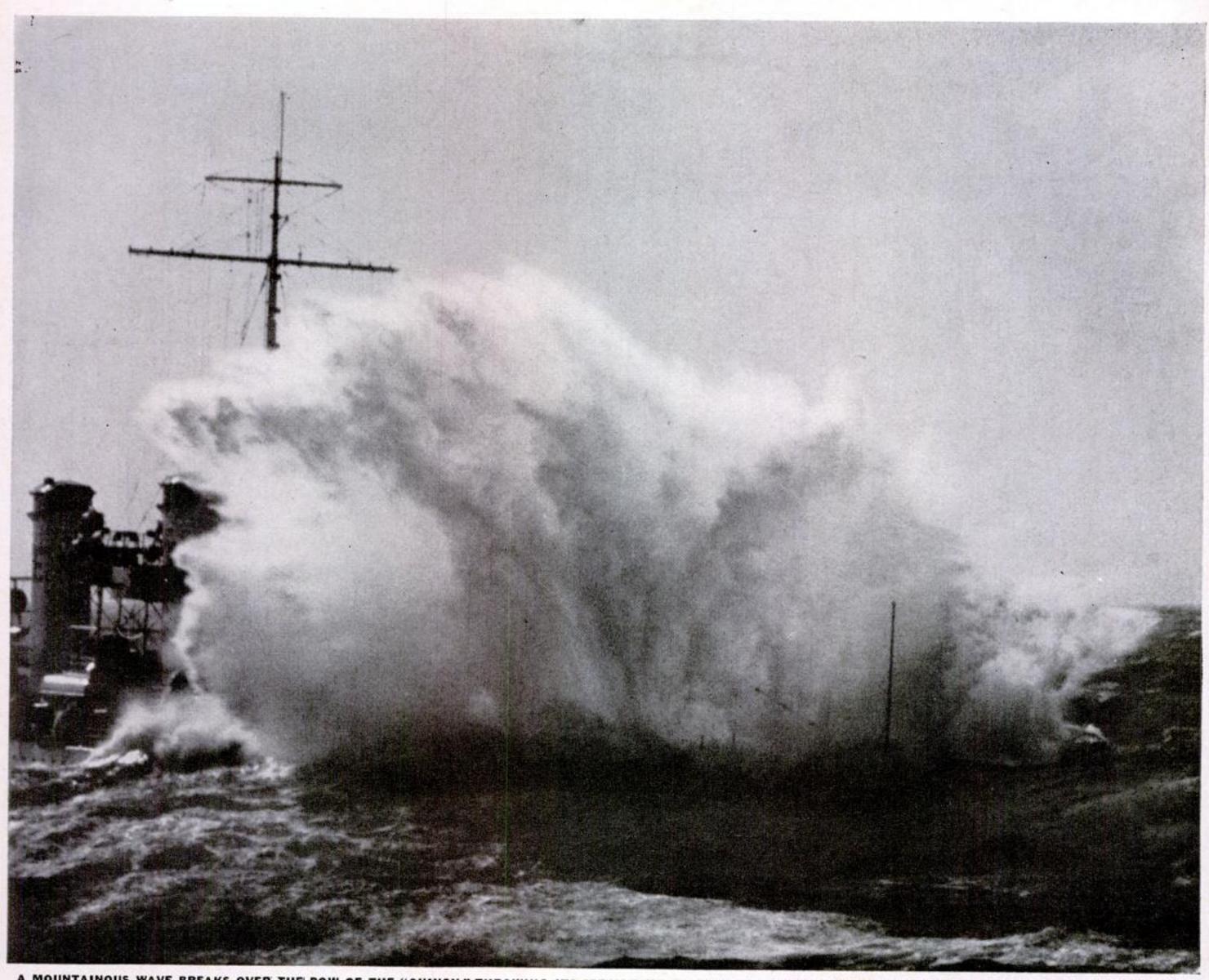
WAVE ALMOST COMPLETELY HIDES THE "QUINCY" FROM CAMERAMAN WHO IS ON "SAN FRANCISCO'S" BRIDGE



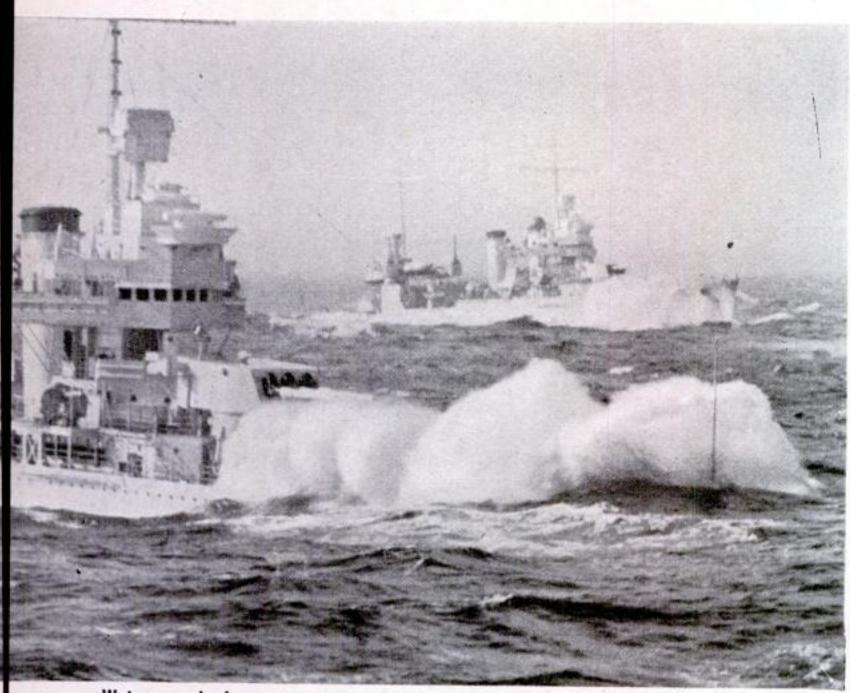
The "Quincy" (foreground) and Tuscaloosa bob up and down in the gale like bits of cork. Here the Quincy is starting to plow down into the trough between two big waves.



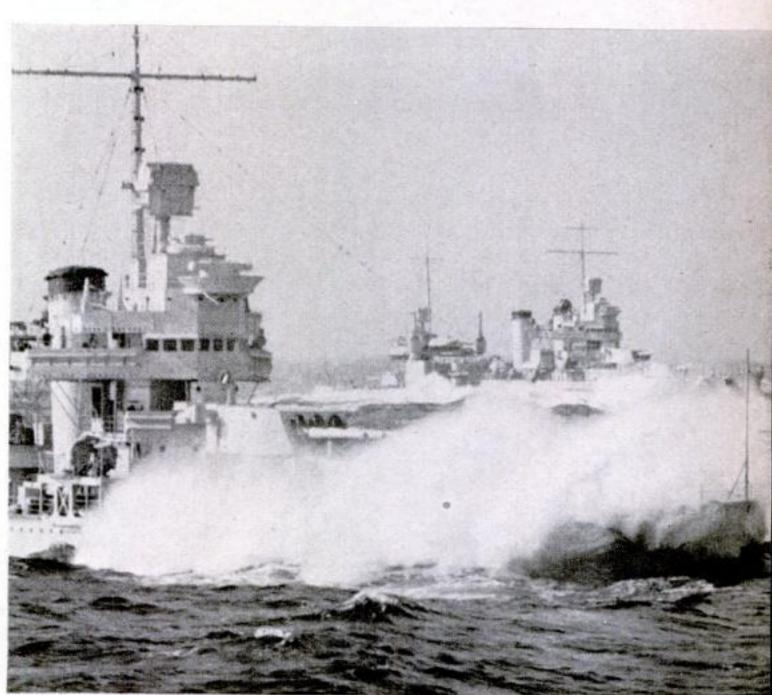
The bow of the "Quincy" sinks under the oncoming wave as the ship plows at 16 knots (normal cruising speed) into the rough sea. All three cruisers later cut their speed down to 12 knots.



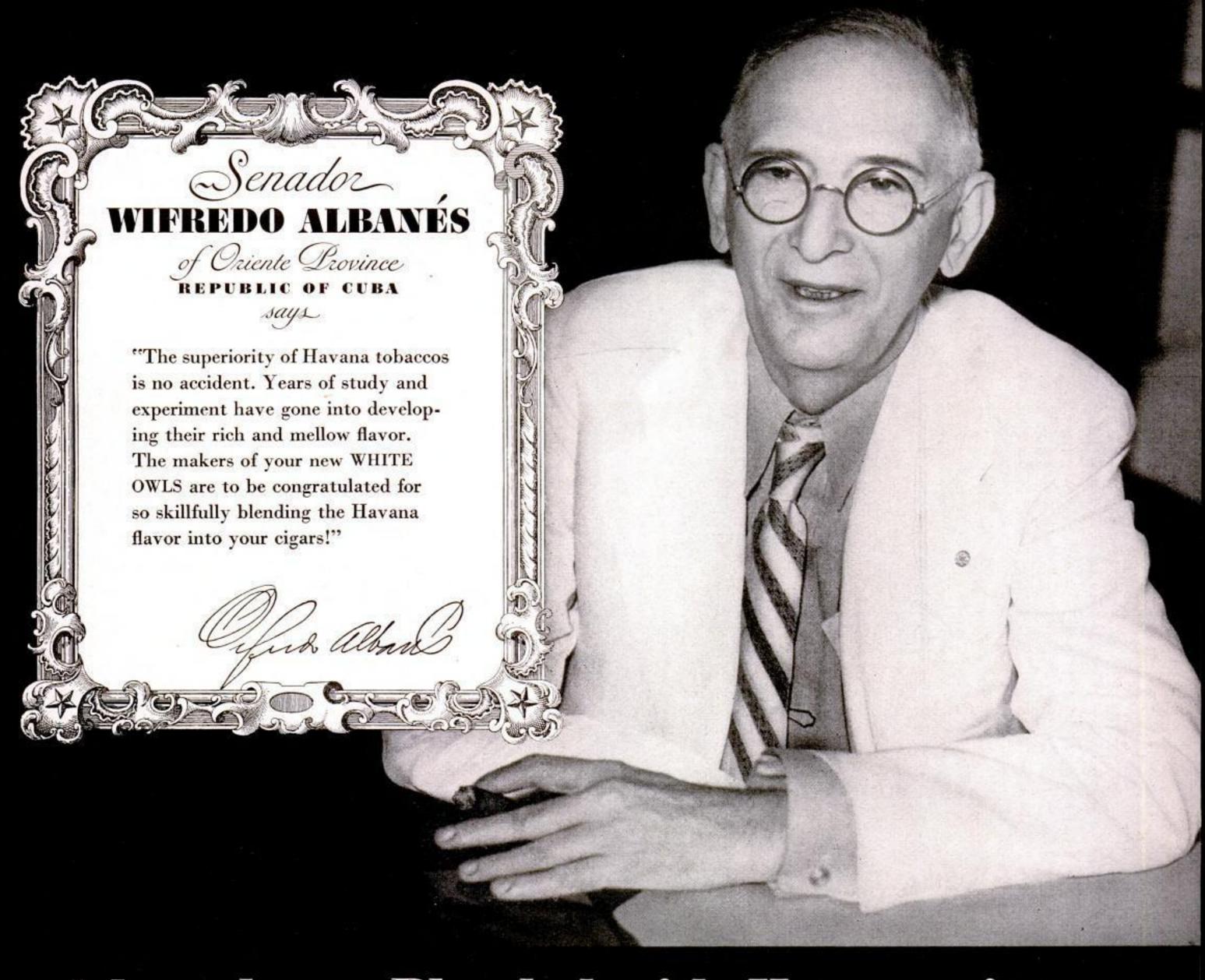
A MOUNTAINOUS WAVE BREAKS OVER THE BOW OF THE "QUINCY," THROWING ITS SPRAY OVER 60 FT. INTO THE AIR AS THE MAN-OF-WAR QUIVERS FROM STEM TO STERN



Water pounds down on the Quincy's deck with terrific force. The Quincy and San Francisco were scarcely damaged by storm, but some steel plates on the Tuscaloosa buckled and loosened.



Spray sweeps "Quincy" as she rises out of wave, only to crash into another a few seconds later. This was one of worst storms Navy has been in since famous 1919 storm.



A brand new Blended-with-Havana cigar _approved by Havana itself

WHERE ELSE BUT HAVANA ITSELF would smokers know best the true flavor of Havana tobacco? That's why we took the <u>new</u> Blended-with-Havana White Owl straight to Cuba to test it. We selected prominent Cubans—real connoisseurs of cigars—gave them some of the <u>new</u> White Owls to smoke. Without exception they all praised the rich Havana flavor of this new cigar.

Yes—and we're certainly proud of the Havana tobacco that goes into this new cigar. It's a choice grade of Havana. Maybe that sounds unbelievable for a 5¢ cigar? Well, we're America's largest buyers of Havana tobacco and we know what we're talking about. Fact is, this Havana tobacco is the same type used in popular cigars costing 10¢ and more. And there's a generous helping of this Havana in each new White Owl, too. If you'd like to get a 5¢ cigar with a 10¢ flavor—ask for a new White Owl today.

New-WHITE OWL-5¢

Your choice of 2 shapes Another "10¢" feature—r

INVINCIBLE

Another "10t" feature—now yours for 5t...a choice of shapes to suit your smoking taste. A long, trim, new Invincible. And a rich, full-bodied, new Club House shape. You get the same amount of tobacco—the same mild blend in either size — only the shape varies.



SEE HOW THE NEW
WHITE OWLS ARE MADE—
NEW YORK WORLD'S FAIR, 1939

BLENDED

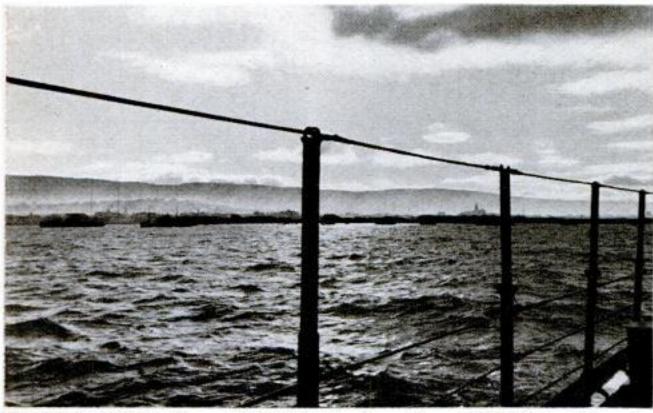
with

HAVANA

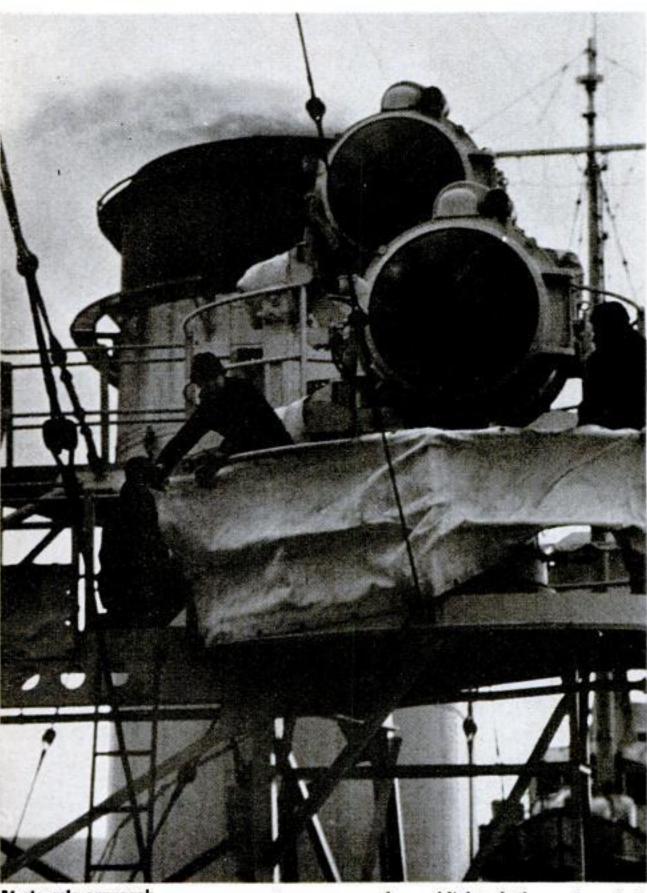
Copyright, 1939 by General Cigar Co., Inc.

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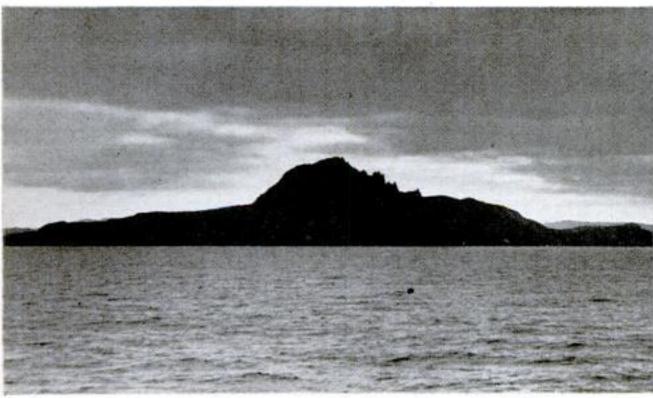
SPEAKING OF PICTURES



Southernmost city in the world, Chile's Magallanes (pop. 30,000), is located on the Strait of Magellan. Cruisers stopped there on recent South American goodwill tour.



At storm's approach, canvas was put over exposed searchlight platforms to protect sailors from spray when they worked lights to show up the rocky slopes of the Strait.



Cape Horn is a desolate peak, rarely visible because of bad weather. U.S.S. Oregon (1898) and "Great White Fleet" (1908) also "rounded Horn" via Strait of Magellan.

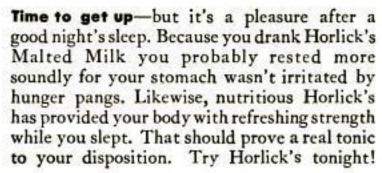
How Horlick's Malted Milk aids sleep

Thousands drink it at bedtime. Try it tonight!

Literally thousands of men and women tell us that they drink delicious Horlick's Malted Milk at bedtime. They say it helps them sleep better. And apparently it does. For night hunger is apt to cause sleeplessness. By drinking Horlick's hot before retiring your hunger is abated, your stomach quieted by a bland, partially pre-digested food. Try it tonight and see if it doesn't help you to sleep.









New low prices. Horlick's Malted Milk is now being sold at much lower prices-by far the lowest in its history. Your whole family can now enjoy this All-American build-up drink at meals in place of tea or coffee, between meals and at bedtime.

Aglow with health... since she's been drinking Horlick's!

Happy, proud parents everywhere sing the praises of Horlick's Malted Milk. They tell how it seems to make such a difference in children — how it helps to give them increased vitality and strength. They say they serve Horlick's Malted Milk-plain or chocolate flavored-to their children at meals, between meals and at bedtime-and that their children simply love it!

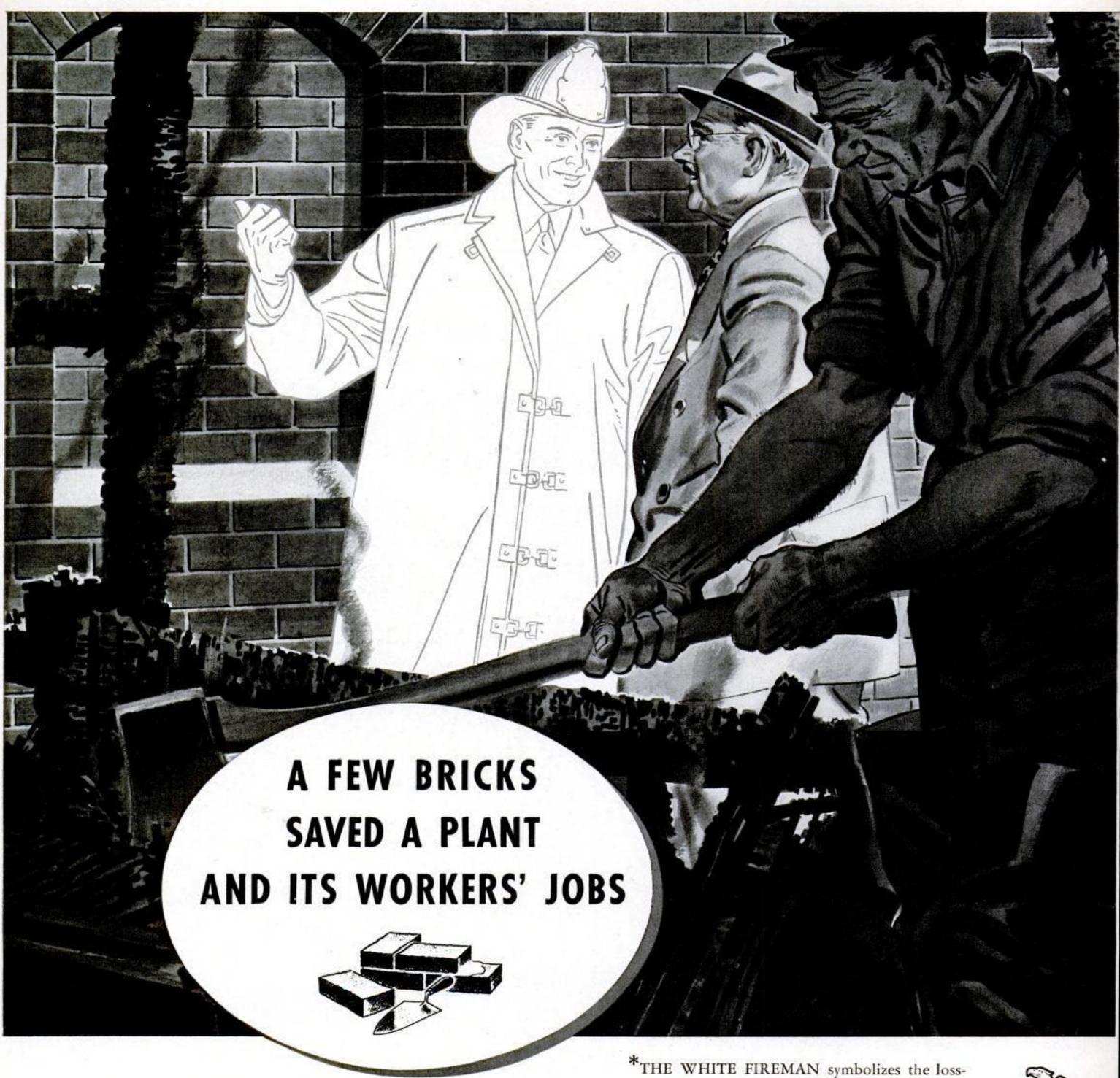
Horlick's Malted Milk comes in tablet form too. Carry it in convenient bottles that fit in your pocket or purse. Eat it like It is easy to understand PRICES candy - a delightful "pick-up."

why children-and grown-ups, too -thrive on Horlick's. For over a half century it's been the great American build-up drink. Recommended by physicians, Horlick's is rich in full cream milk with nutriments extracted from wheat and malted barley. Proteins needed for growth. Minerals such as calcium and phosphorus good for teeth and bones. Natural vitamins - A, B and G. Ask for "Horlick's" at the soda

fountain, too. For sample tin of delicious, healthful Horlick's Malted Milk Tablets, send a 3-cent stamp to Horlick's Malted Milk Corporation, Dept. L.7, Racine, Wis., or Montreal, Canada.



HORLICK'S THE ORIGINAL MALTED MILK



THIS great manufacturing plant, its town's leading industry, represented a \$2,000,000 investment. Adjacent to the main plant was a smaller building for storing combustible stocks. The White Fireman* realized it was impractical to move the entire building, but he strongly urged that the window-opening in the side next to the main plant be bricked-up. The suggestion was followed and when a serious fire occurred, less than a year later, it was confined to the storage building where it started . . . the bricked-up window-opening prevented it from reaching the main plant.

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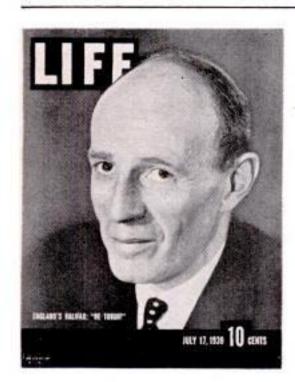
July 17, 1939

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LIFE'S COVER: The man who took the headlines away from Adolf Hitler last week was the British Foreign Secretary, Lord Halifax. From China, Germany, Poland, Danzig, Russia, the headlines all bore down on him and waited for his answers. In England itself a great clamor had arisen to add Winston Churchill to the Cabinet and possibly Anthony Eden whose advice to Halifax was: "Be tough. Look tough. Talk tough. Act tough." But there was small chance that Halifax would soon leave his job. For more on Halifax and his week, see pp. 22-23.

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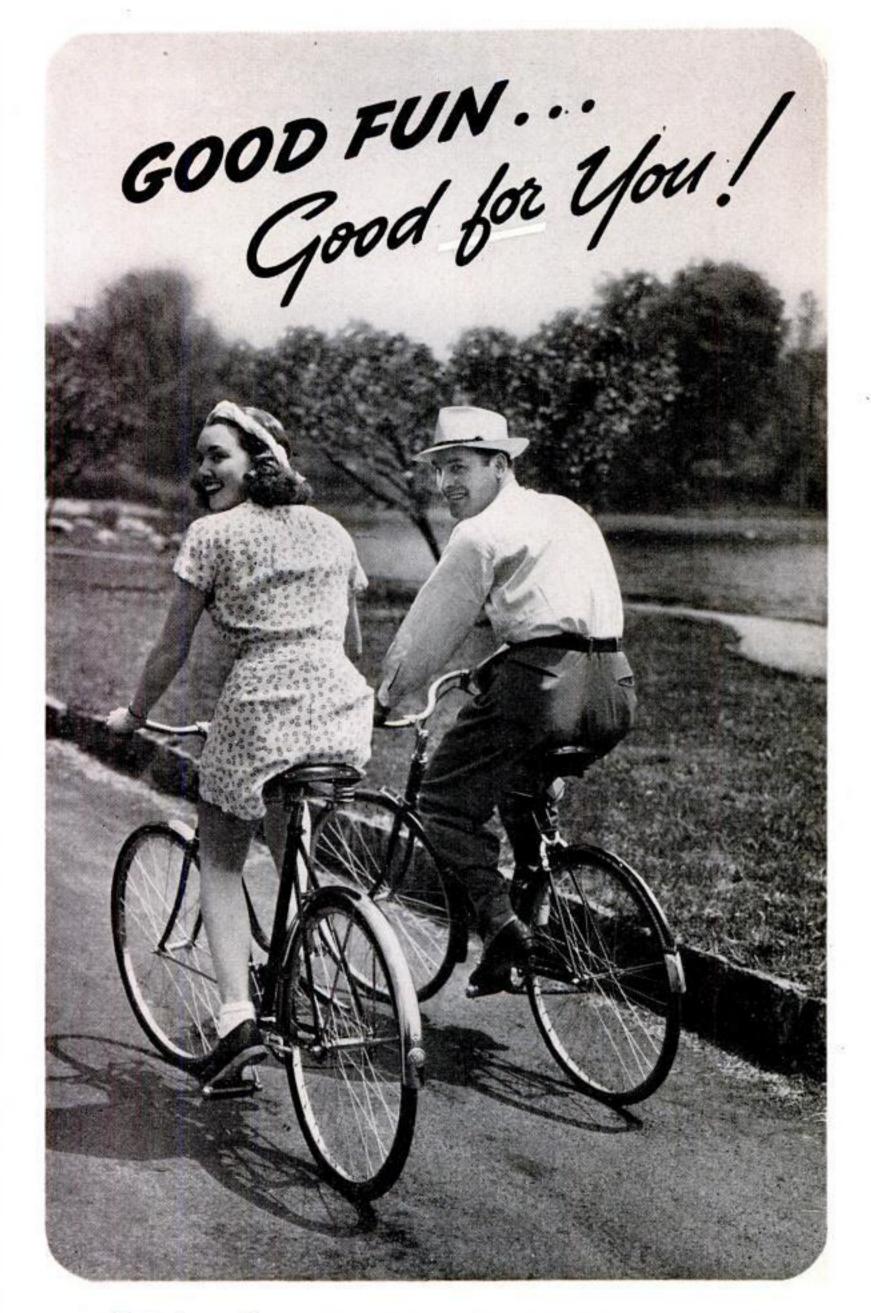
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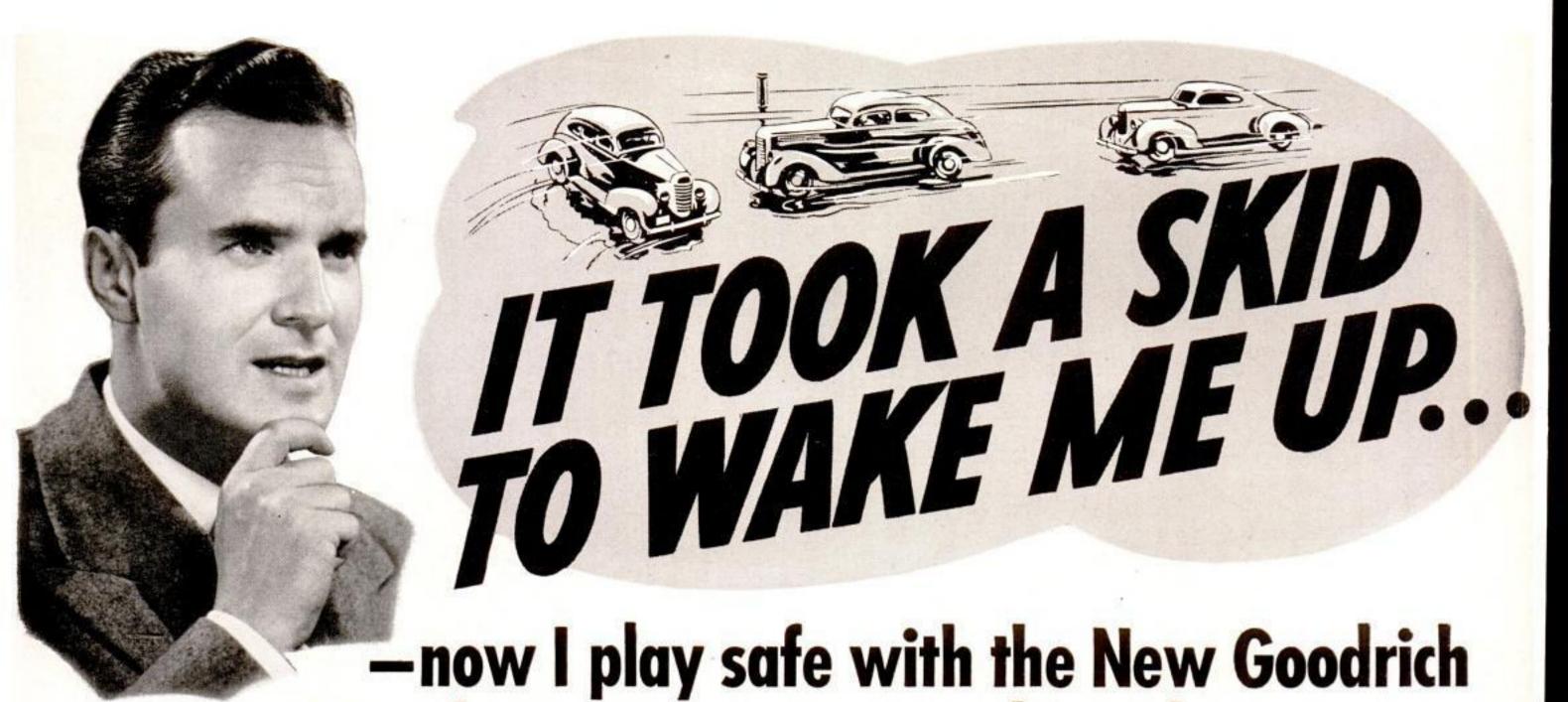
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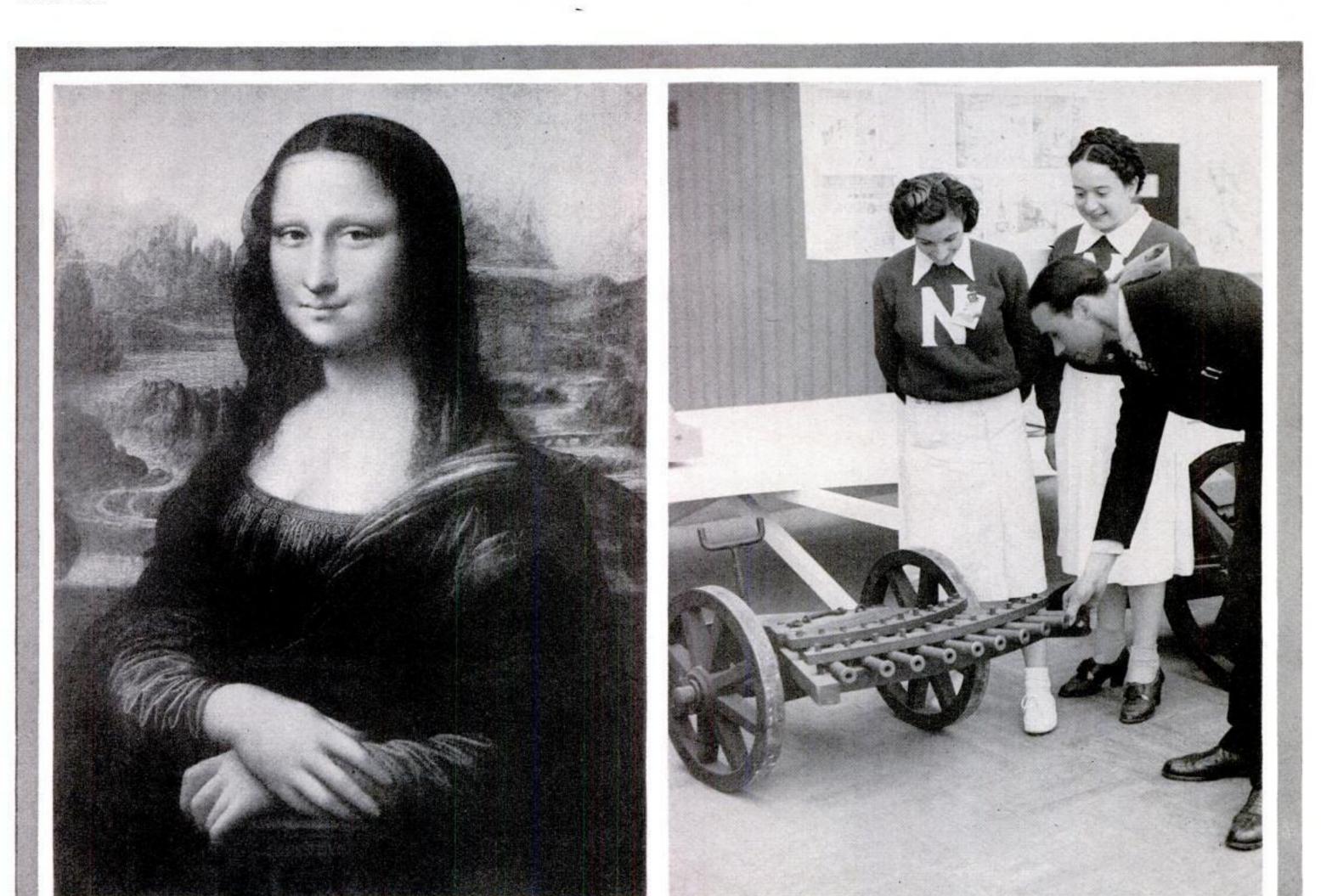
Goodrich SAFET Silvertown



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Life-Saver Tread Skid Protection . . . Golden Ply Blowout Protection . . . More tread rubber for months of extra
mileage . . . New Hi-Flex Cord for
greater strength and longer tire life
. . . Double Cord Breaker Strips to absorb road shock and resist bruising
. . . Double-Cured for extra toughness
all the way through . . . New Streamlined Sidewall Design to beautify
your car.

Vol. 7, No. 3 July 17, 1939



LEONARDO PRODUCED THE "MONA LISA" (ABOVE), WORLD'S MOST CELEBRATED PORTRAIT, AND ALSO SKETCHES FOR THE FIRST MACHINE GUN, HERE SHOWN IN MODEL

ITALY CELEBRATES THE SCIENTIFIC GENIUS OF LEONARDO DA VINCI

In Leonardo da Vinci was combined the world's greatest genius for art and science. For nearly five centuries the fame of this extraordinary Italian has rested primarily upon his Renaissance paintings. Today the Italian Government is making Leonardo important 20th Century news with a breath-taking ex-

hibition of his scientific prowess at Milan. In war-scary Europe tourists are flocking to this fabulous show to marvel at the 15th Century mind which anticipated dozens of the fundamental inventions and discoveries on which the modern world so proudly plumes itself.

Only in the last decades have scholars dug into Leonardo's scattered and illegible notes and sketches and learned the full range and scope of his prodigious scientific genius. From these notes and sketches expert Italian engineers have now constructed at a cost of \$250,000 some 200 working models of devices Leonardo conceived for the advancement of civilization. On these pages LIFE presents some of Leonardo's mechanical "firsts" which make his Milan exhibition look like a modern patent office.

Out of Leonardo's busy brain came the steam engine, parachute, belt drive, transmission gear-box, movable printing-press bed, fire ladder, adjustable telescope, rolling mill, pile driver, roller bearing, breach-loading cannon, rapid-fire gun (above), a submarine, a sort of planetarium, thermostat, centrifugal pump, rifled firearms, sprocket chain, spindle and



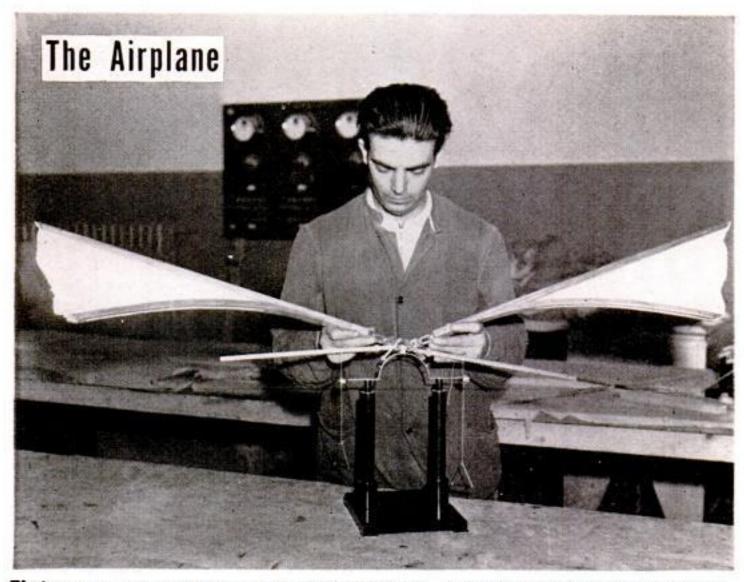
LEONARDO DA VINCI

flyer, lamp chimneys and the universal joint. Besides this he speculated smartly about the flight of birds, the flow of water, the reason for wind, the anatomy of the human body. He was far ahead of his time in mathematics, astronomy, geology, botany, anatomy, the laws of perspective, of sound, town planning, archi-

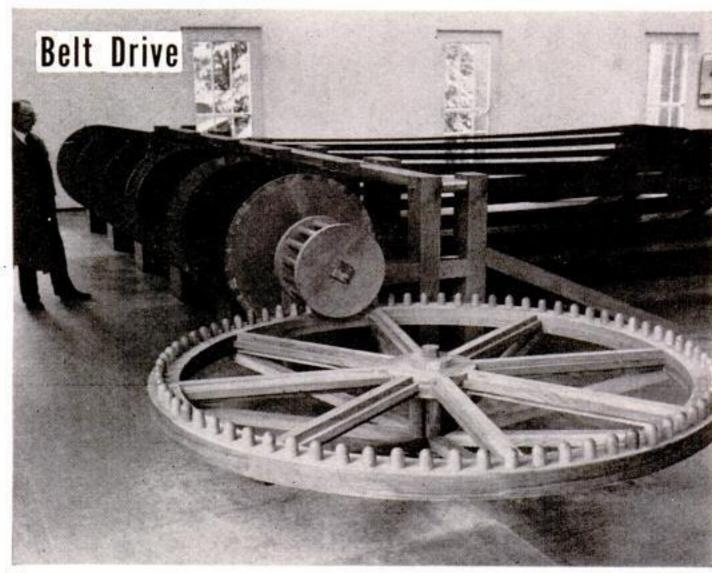
tecture, fortification and bridgebuilding. He even guessed what military men only discovered last year in the Spanish War—that tanks cannot be used alone but must have infantry support.

Leonardo's scientific achievements were displayed at Milan against the traditional background of art. Museums all over the world sent their Leonardo pictures to the Italian show. The Paris Louvre lent the *Mona Lisa* (above) and the even more beautiful Virgin of the Rocks. From the royal family of England came the world's greatest collection of Leonardo sketches, mysteriously found in a Windsor Castle chest in the reign of King George III, and first catalogued and published only four years ago.

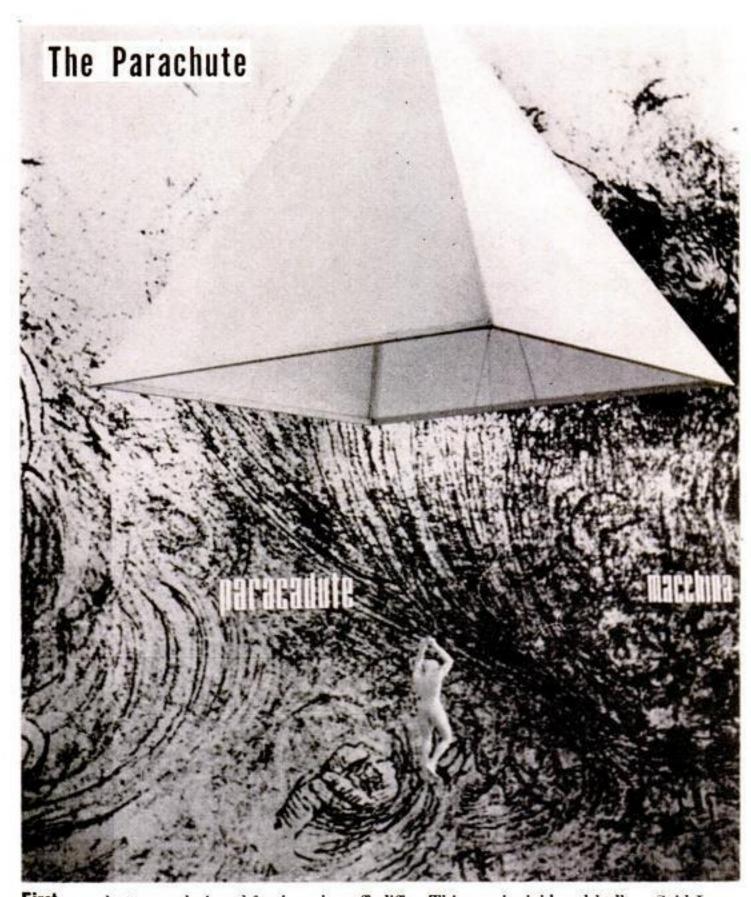
More material on this mighty man was last week published in the U.S. in two gigantic volumes called *The Literary Works of Leonardo da Vinci* (Oxford University Press: \$75), edited by the late Jean Paul Richter and his daughter Irma. The Richters had shockingly decided in their research that the traditional portrait of Leonardo (*left*) is not actually he and that there is probably no certain likeness of him extant.



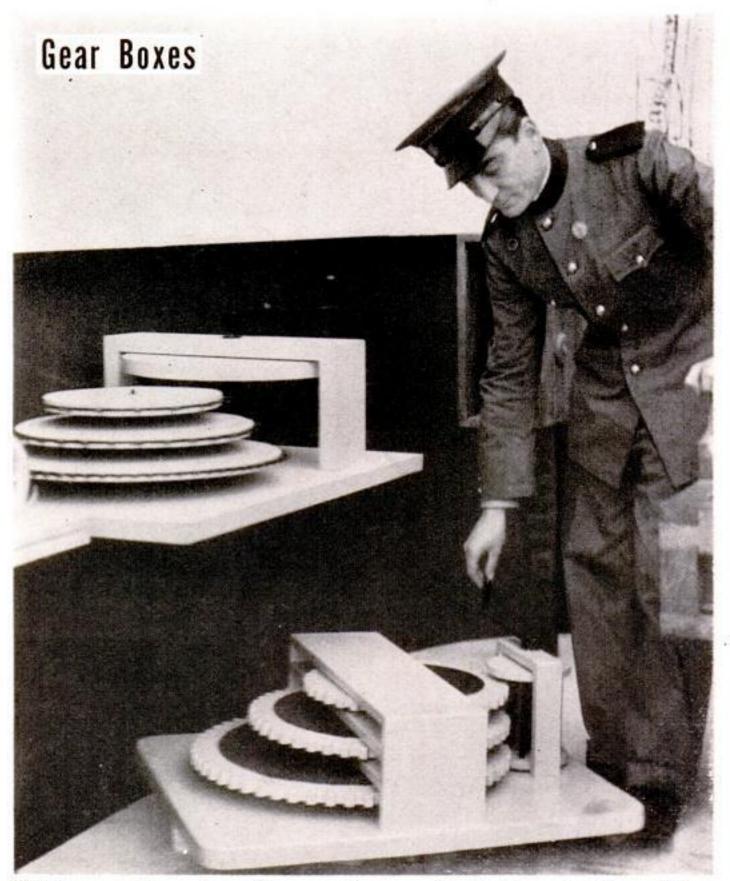
First man to analyze flight was Leonardo da Vinci. He built a crude airplane with batlike wings and powered by the operator's leg motions. His ornithopter never flew but his scientific observations on the flight of birds are as sound today as they were in 1500. Above: a 1939 model of da Vinci's flying machine. Details of the machine are shown in sketches below.



First multiple belt-drive was Leonardo's forgotten notion. The wheel in foreground revolves the little gear with which it meshes, which in turn revolves the five belts in the background. The cog-wheel and squirrel-cage gear idea was Leonardo's favorite power device. No modern factory could function without thus being able to change the direction of its power.

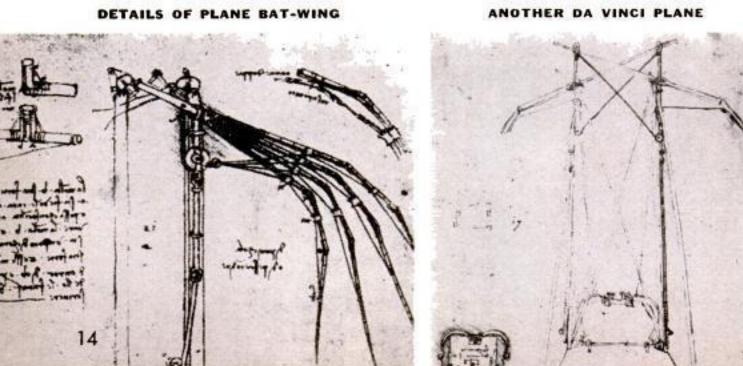


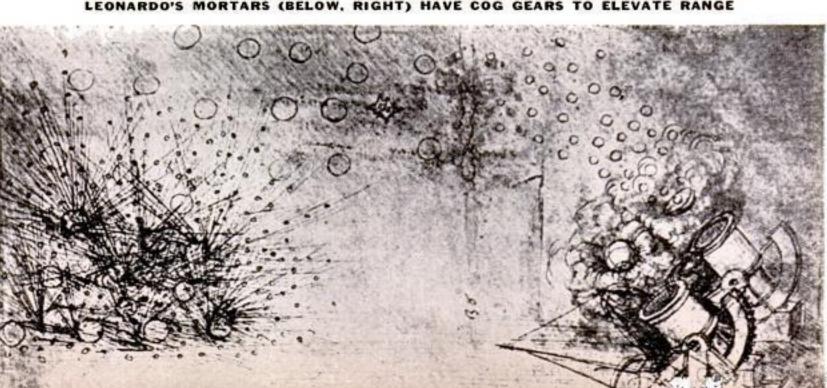
First parachute was designed for jumping off cliffs. This one is rigid and bulky. Said Leonardo. "If a man have a tent made of linen of which the apertures have all been stopped up, he will be able to throw himself down from any great height without sustaining any injury." The modern collapsible parachute was not invented until the late 18th Century.

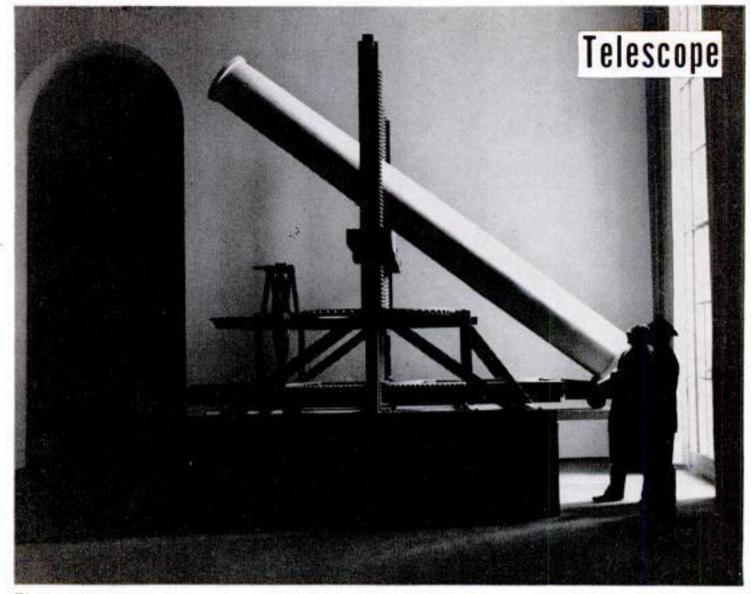


First three-speed transmission (foreground) was conceived by Leonardo 400 years before the invention of the automobile. But, unlike the modern gear box in a car, this model from his sketches does not take the power off the gears at variable speeds. Here Leonardo designed the first crude gear-tooth cut out of the wheel rather than a peg stuck into it.

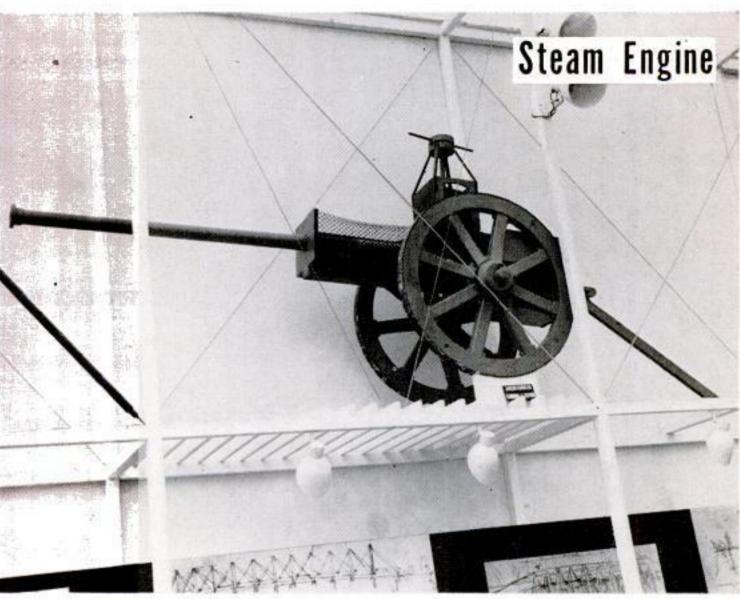
LEONARDO'S MORTARS (BELOW, RIGHT) HAVE COG GEARS TO ELEVATE RANGE



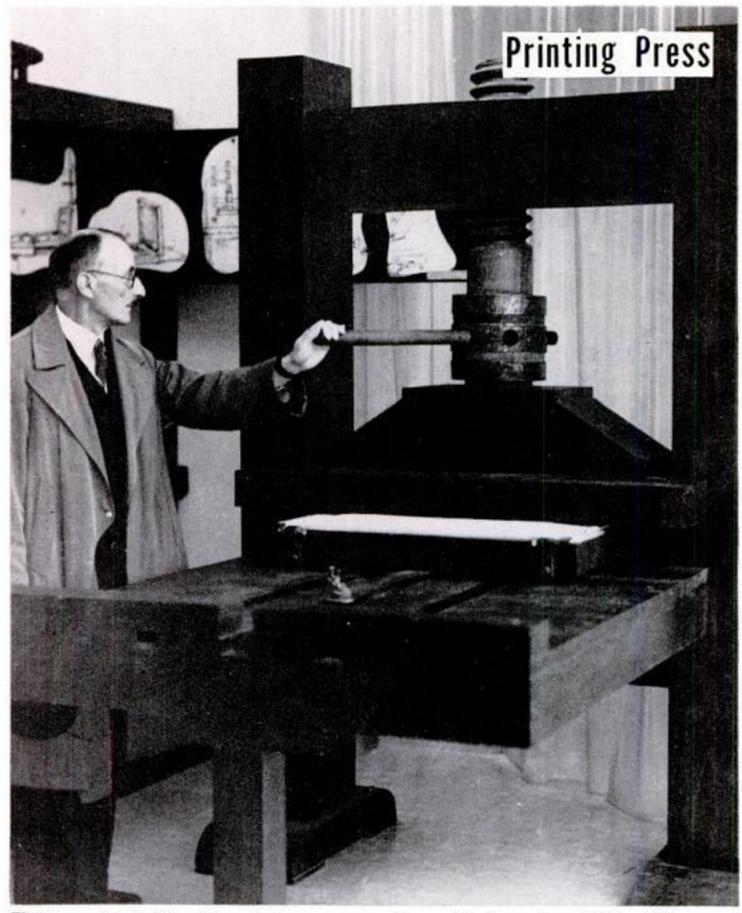




First adjustable frame for telescopes was designed by Leonardo. In this \$1,000 model the whole base swings, and the tube is delicately raised or lowered by an exceedingly ingenious system of screws. Modern observatories use the same mechanical principle today. Galileo, who named the telescope and first put it to practical use, came a century later.



First steam engine was invented by Leonardo da Vinci, 250 years before James Watt. Leonardo used it to fire a ball from a gun. The shot was the engine's 79-lb. piston, driven out of a steam-cylinder for a distance of 1,200 yd. If Leonardo had made practical use of this great invention, modern civilization might have started on its way 250 years earlier.



First movable bed for the printing press was Leonardo's invention. Before this, a generation after Gutenberg's great invention of the printing press, the screw had to be raised all the way to remove the printed paper. Leonardo raised the screw a little, slid the type bed out from under the press. The modern flat bed press now uses the same principle.



First application of the self-locking worm gear to a ladder was almost certainly Leonardo's. This is much the same as the fire-ladders used today except for the lack of counter-weights. Notice that the gears on the elevating wheel are pegs stuck into the wheel, unlike the far superior teeth cut out of the wheel in the gear-box shown on the opposite page.

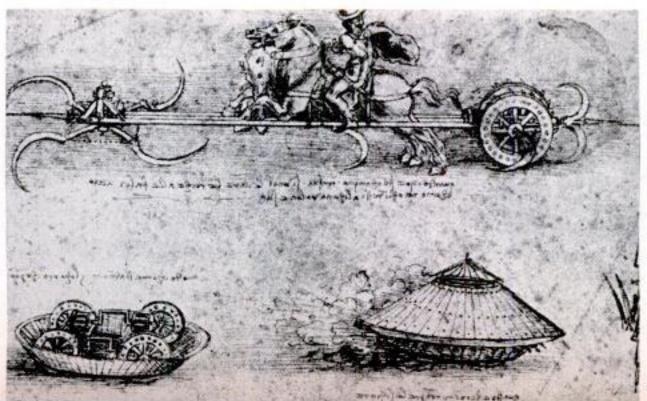
FIRST LIFE PRESERVER

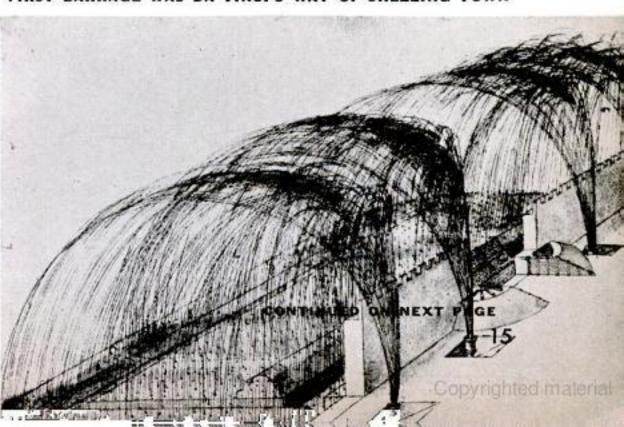
TANK (LOWER) USED MODERN PRINCIPLES.

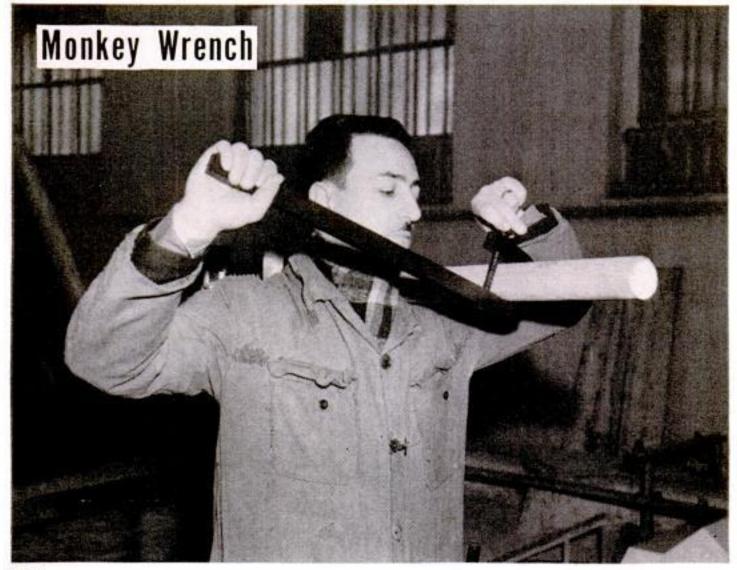
CHARIOT IS PLAYFUL

FIRST BARRAGE WAS DA VINCI'S WAY OF SHELLING TOWN

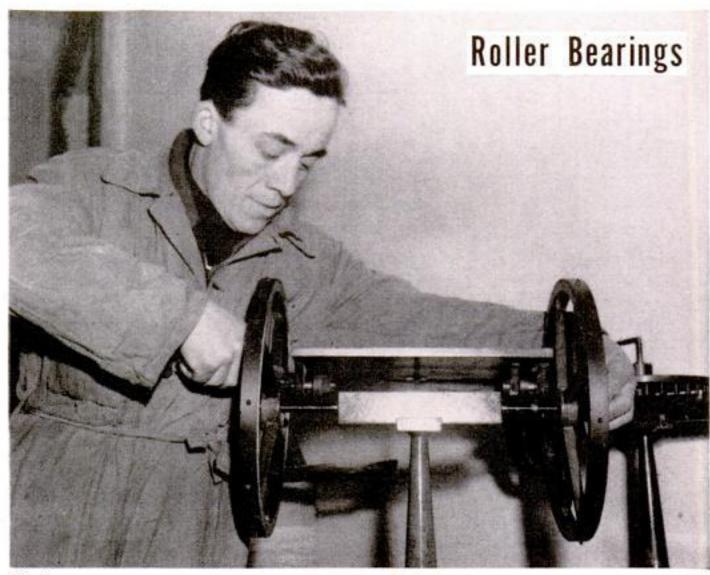




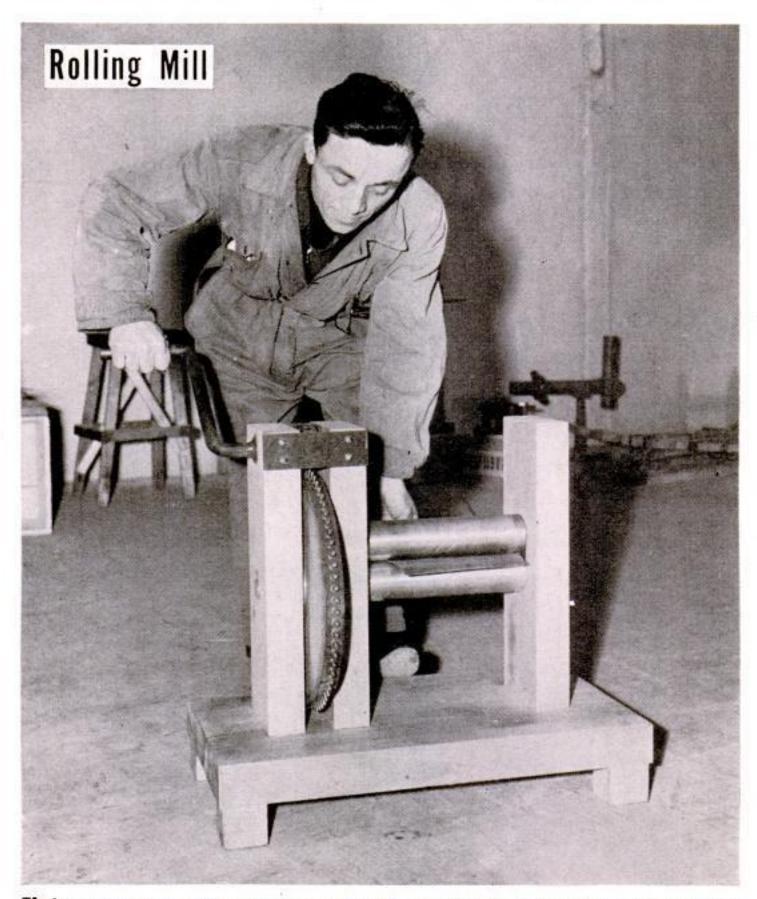




First adjustable wrench was Leonardo's idea of a screw clamp with a long-handled lever. Though not strictly a wrench in the modern sense, it unquestionably serves the same purpose and can be called, as the Italian Government calls it, "the grandfather of the monkey wrench used by all mechanics today." The workman is closing it on a piece of work.



First elimination of friction by the use of roller bearings is shown in this model of a wagon axle. The ordinary friction of the axle is enormously reduced by inserting two little wheels on each side upon which the axle revolves and which carry the weight of the wagon. Leonardo was the first to bring any mechanical solution to the huge problem of friction.



First rolling of metal was Leonardo's idea. Every metal industry in the world today uses this very device in some form or other. Metal in Leonardo's day was hammered thin but it was his idea to make copper sheets by putting the copper through a sort of clothes wringer. Next to the steam-gun, this is probably the most important invention shown here.

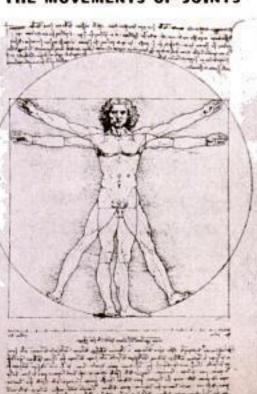


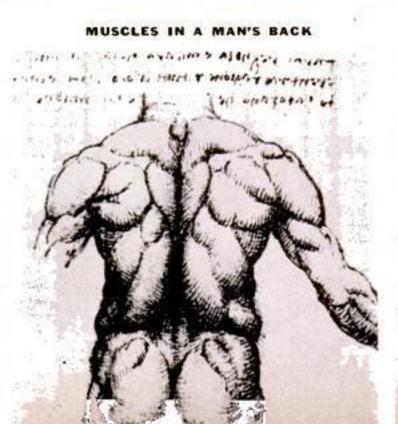
First pile driver appears in Leonardo's notebooks. This machine is the same, in every principle, as the pile drivers in operation today. On the wall behind it are Leonardo's sketches, seen also in some of the other pictures. He produced not only the idea of raising a weight to a height and then dropping it, but also the automatic release at the top.

LEONARDO'S STUDIES OF HANDS AND FACES

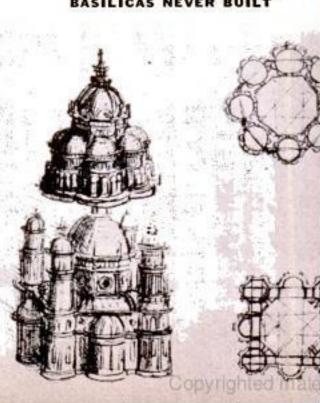


THE MOVEMENTS OF JOINTS





BASILICAS NEVER BUILT



LEONARDO ROAMED, WORKED, JOKED AND SOUGHT FACTS

∐istorically not much is known about Leonardo da II Vinci. He was born in the golden age of the Renaissance in 1452, the illegitimate son of a Florentine notary. He studied with the painter Verocchio until at 20 he became a member of the painters' guild of Florence. He worked for Lorenzo de' Medici ("The Magnificent") until he was 31, discovering the full use of light and shade, the laws of perspective, the physiology of the eye, anatomy, the powers and properties of water. He rousted through the town, a handsome yellow-haired young man, and learned all he could from old mathematicians, doctors and astronomers. Then he switched to Milan and Ludovico Sforza ("The Moor"). Here he planned a modern new city, new fortifications for the castle and the new cathedral but none of these plans was accepted. He made his living composing pageants, jokes, fables and prophecies for the Milanese court. At this time, as a sideline, he painted The Last Supper (right) and the superb Virgin of the Rocks. Just as he became Sforza's chief military engineer, Sforza was overthrown by the French armies and Leonardo, at 46, moved on to Mantua, Venice and then Florence.

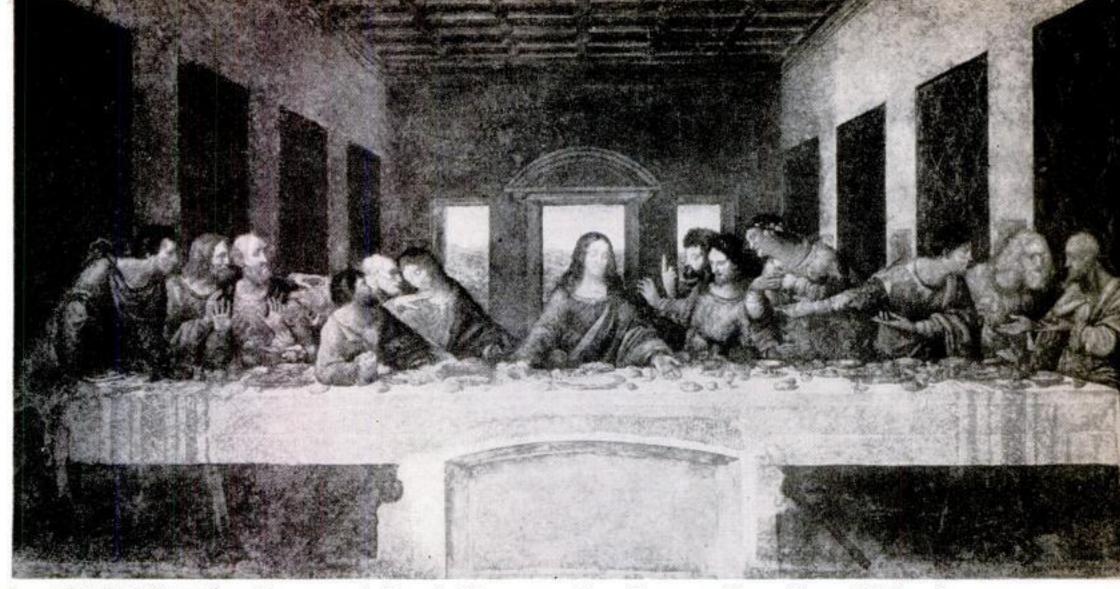
There his chief interests were geometry, geography and engineering. He wrote correspondents for data on the tides in the Euxine and Caspian Seas and turned out the beautiful Virgin and St. Anne, now at the Louvre. At 50 he worked briefly for Cesare Borgia and produced six large-scale maps of western Italy. In 1517, his hand slightly paralyzed, he went to Amboise to work for France's King Francis I. He still hoped to get some order in his vast collection of notes but he died soon after Easter, 1519.

The true story of Leonardo is not in these wanderings but somewhere between the lines of his sketches and notes. He was worldly enough in his time to know that his true interests would have made him seem a monster to his contemporaries. A courtier wrote of him: "He was the arbiter of all questions relating to beauty and elegance, especially in pageantry. He sang beautifully to his own accompaniment on the lyre to the delight of the whole court." He was a fine horseman, a great carouser and a ribald joker (Sample: "A painter was asked why, since he made such beautiful figures, which were but dead things, his children were so ugly; to which the painter replied that he made his pictures by day, and his children by night.") He was also a vegetarian and often went for days without food.

He wrote his notes backwards with his left hand, running short words together and breaking up long ones, in a personal cipher of his own. He worked less on particular jobs than on general problems, on the reason for things, on a vast effort to dig the truth out from a closely observed reality. He was simply more curious about the world than any other man who ever lived up to that time and he found out more about it.

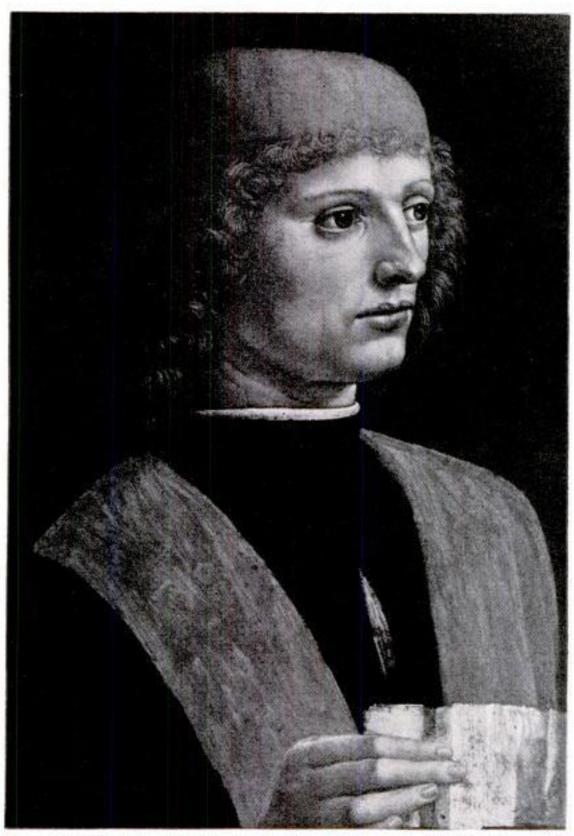
Best available source-books are: The Literary Works of Leonardo da Vinci (Oxford University Press: \$75); The Notebooks of Leonardo da Vinci edited by Edward MacCurdy (Reynal & Hitchcock: \$15); and Catalogue of the Drawings of Leonardo da Vinci at Windsor Castle by Kenneth Clark (Macmillan: \$25).

Basilicas were sketched by the half-dozen. The sketch at left is seen again on the wall at extreme right, behind the models the Italian Government here constructed from Leonardo's sketches. Notice that he produced two octagonal plans. In his time Leonardo advertised himself as an architect and engineer, as well as painter and sculptor.



Leonardo's "Last Supper" was his greatest single work. He did it in four years (1494-98) of the hardest and most consecutive work of his life, on the wall of the convent church of Santa Maria delle Grazie at Milan. The tem-

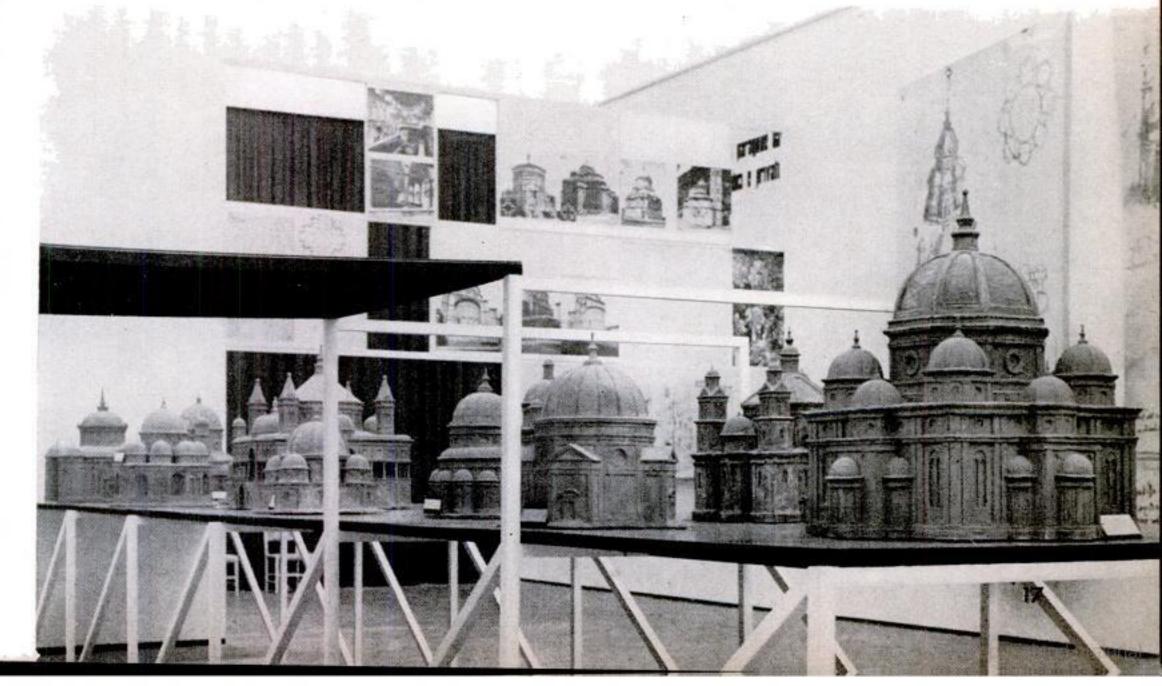
pera plaster began cracking, scaling and fading almost at once, was badly restored many times, and finally restored only 15 years ago. Yet this remaining "ghost of a picture" still has a cool, other-worldly beauty impossible to describe.



Il Musicista (The Musician). Of the pictures ascribed to Leonardo today, various experts say he did only four or 13 or 22. Many more are lost. But he wrote at enormous length about the art of painting, and perspective. Some critics doubt the authenticity of this one.



His patron's wife was Beatrice d'Este, wife of Sforza. Leonardo is supposed to have loved the Duke's mistress, Cecilia Gallerani. Beatrice's sister Isabella is supposed to be Mona Lisa.



ON THE NEWSFRONTS OF THE WORLD

Building unions head for trouble; U.S. moves to claim Antarctica; athletes win abroad

Last week a vast majority of the nation's photographers were busy with such snap assignments as crowded bathing beaches, little boys who hurt themselves with firecrackers and pretty girls sitting on cakes of ice. A few photographers, by contrast, had an adventurous time getting the pictures which fill this issue. Two Englishmen had the rare privilege of photographing the Royal Princesses in a swimming meet (pp. 52-55). Their prints were rushed to LIFE on the first England-U. S. mail flight of the Yankee



IONE ROBINSON

Clipper. Bonney Powell of Movietone News needed four sailors to hold himself and camera up while he made the pictures of Navy ships rounding the Horn (pp. 6-9). Margaret Bourke-White spent several weeks photographing the Telephone Company, during which time a reporter for the Bell houseorgan faithfully recorded

her costume each day. The other girl photographer whose pictures appear in this issue, Ione Robinson of Portland, Ore., has spent several months painting and photographing the Spanish refugees in French camps (pp. 64-65).

Heading for Trouble. By such tactics as the sitdown strike, the CIO gave itself a black eye from which it has not yet fully recovered. Last week, however, it was the A. F. of L. which seemed bent on courting public disfavor. In dozens of cities from coast to c: ast, A. F. of L. locals called strikes of their workers employed on WPA projects.

Reason for the strikes was a clause in the new Relief Act, providing that all WPA workers, skilled or unskilled, work the same number of hours in a month. Heretofore, skilled workers on WPA have received regular union hourly wage rates. Since their monthly pay is fixed, this meant that they worked many fewer hours than common laborers. In New York, for example, a WPA electrician was paid \$2 an hour and could work out his monthly pay



WOOD

of \$84 in only 51/4 eighthour days. Under the new law he must work 130 hours for the same pay.

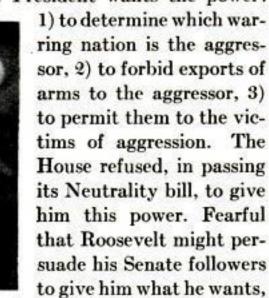
Last week WPA Administrator Col. F. C. Harrington told the "strikers" that if they didn't want to work for WPA they didn't have to, said he would drop them for good if they stayed off the job five days.

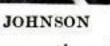
The unions chiefly involved were the carpenters, plumbers, electrical workers, plasterers, et al. in the Building Trades Department of A. F. of L. Meanwhile trouble loomed ahead for these same unions when Assistant Attorney General Thurman Arnold, the Government's anti-trust chief, announced a frontal attack on "restraint of trade" in the building industry. Yale Professor Arnold is out to force building costs down, make homes cheaper, start a housing boom. He expects to proceed against both contractors and unions as well as against States and municipalities which have laws strangling the building industry. Unions are liable to prosecution for such practices as refusing to handle new and cheaper building materials.

Support for Mr. Arnold's drive came from General Robert E. Wood, board chairman of Sears, Roebuck & Co., who told the Temporary National Economic Committee in Washington that Sears, Roebuck had had to give up plans for building low-cost homes for its workers in Chicago because of "restrictions" imposed jointly by unions and contractors. "We have a big plumbing business," said the General, "but in our own home town of Chicago-even in our own building—we could not use our own materials."

The Senate. The Senate last week voted to restore to President Roosevelt the power to devalue the dollar, which it had taken away from him the week before. The Senate last week set the domestic price of silver at 71.11¢ an ounce. The Senate last week prepared to debate proposals to limit a President to one sixyear term—proposals which would get nowhere but were a fine excuse for Senators to let off steam on the third-term issue. And the Senate last week looked forward, wistfully and unwillingly, to a long hot debate on Neutrality.

In case of war the President wants the power:





them presumably ready to filibuster.

that Roosevelt might persuade his Senate followers to give him what he wants, Senator Hiram Johnson called a meeting of isolationist Senators to plan a fight on Roosevelt's designs. Always at his best when leading a fight for U. S. isolation, "Hi" Johnson declared that he had 34 Senators on his side, all of

Prexy in Jail. Dr. James Monroe Smith, ex-president of Louisiana State University, comfortably lodged last week in a large cell with bathtub and electric fan in East Baton Rouge Parish. Found in Brockville, Ont., July 1, day after he had been indicted for embezzling the funds of L.S.U. (LIFE, July 10), he blandly told police, "I didn't even know the authorities were looking for me." The reflection of The Law was caught by a camera in the window of the car which took him to jail.



THE LAW AND DR. SMITH

U. S. to Antarctica. Congress finally granted the Department of Interior the \$340,000 it had requested to finance an expedition to the Antarctic Continent (LIFE, June 12). Promptly, President Roosevelt directed Rear Admiral Richard Evelyn Byrd to



BYRD & GRUENING

take three ships to Antarctica and officially claim for the U.S. the territory which he and Lincoln Ellsworth have already explored. The land lies in the Western half of the polar continent, adjoining territory recently claimed by Germany. Byrd, after discussing his plans with Ernest Gruening, Chief of the Division of Territor-

ies and Island Possessions, said he would establish three permanent bases in the frozen wastelands.

U. S. Athletes on Top. In England, American athletes participated last week in three prize rowing events at Henley and five "world championship" tennis events at Wimbledon. By week's end they had taken all eight titles with surprising ease. The victorious oarsmen: Harvard, Tabor Academy, Sculler Joe Burk. The victorious racquet-wielders: Bobby Riggs, Alice Marble, Sarah Fabyan and Marble (women's doubles). Riggs and Alice Marble (mixed doubles), Bobby Riggs and Elwood Cooke (men's doubles).

The U. S. faltered, however, in golf. In the British Open championship at St. Andrews, only one American, Johnny Bulla of Chicago, reached the final round. He placed second to Dick Burton, English pro.

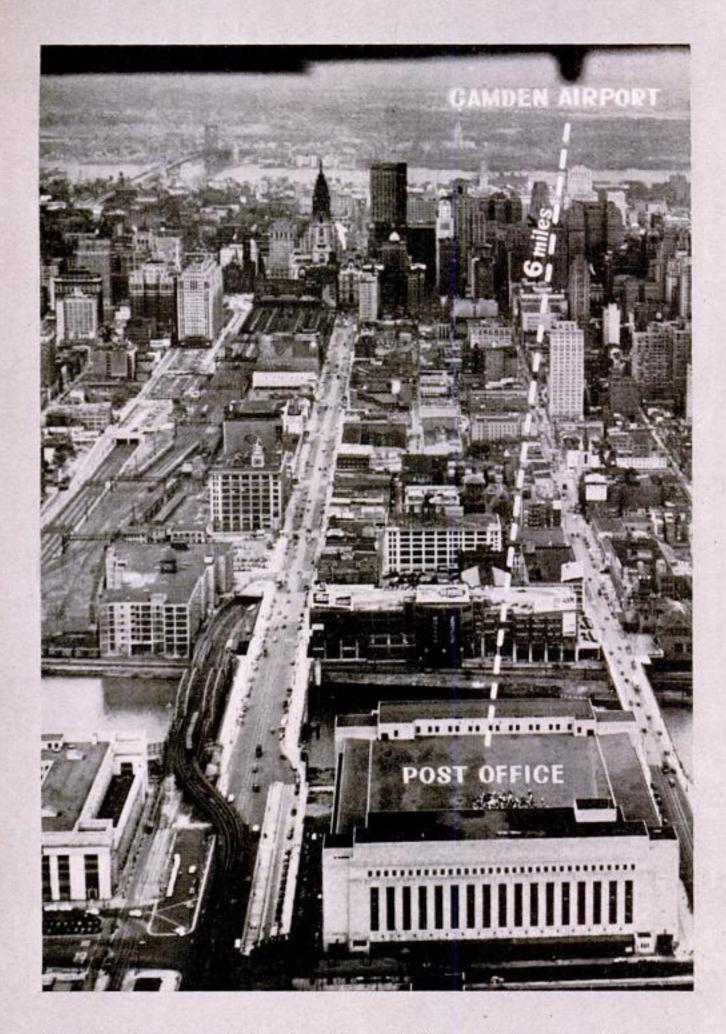
Censored War. For two months the blinds of ignorance have been down on the border war between the Russian satrapy of Outer Mongolia and the Japanese satrapy of Manchukuo. Moscow and Tokyo have issued contradictory and wildly extravagant reports of great battles fought and won on land and in the air. Last week, as the first American correspondent to reach the scene-a hot, mosquito-infested plain -Russell, Brines of the A. P. was able to raise the blinds an inch or two. On his way to the front he passed long lines of Japanese supply trucks, saw heavy artillery action and a few Japanese bombers, arrived at the end of a four-day battle in which the Japanese advanced six miles.

PICTURE OF THE WEEK

In the Black Hills on July 2, the head of Theodore Roosevelt-fourth and final unit in the giant presidential quartet created for the Mount Rushmore National Memorial-was formally unveiled. Floodlights thrust the great granite heads into gray, ghostly relief against the night sky. Fireworks blazed overhead. It was just ten years ago that Sculptor Gutzon Borglum and his crew of dynamiters and stone carvers started work on the \$750,000 project. The head of Washington (left) was unveiled first. Next emerged those of Jefferson (second from left) and Lincoln (right). Some trimming still remains to be done about the brow, mouth and jaws of Roosevelt I before the final scaffolds are removed. Completed, the group is expected to endure a million years.



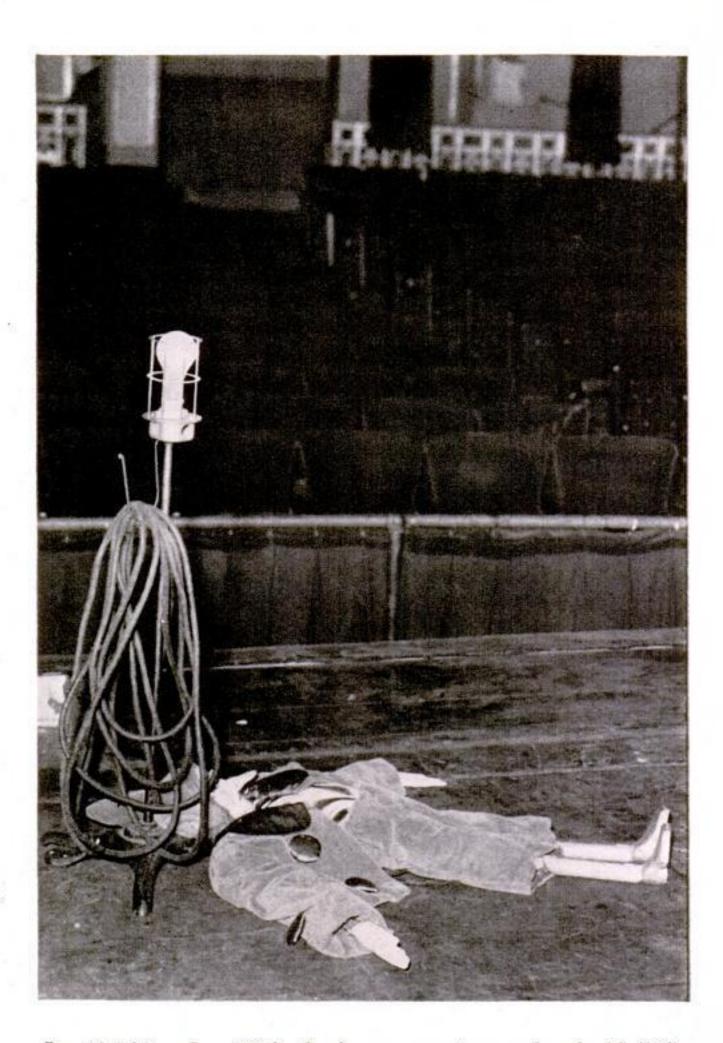
WORLD'S FIRST AUTOGIRO AIR-MAIL SERVICE STARTS AT PHILADELPHIA



On the afternoon of July 6, a blue-and-silver autogiro soared from the great flat roof of Philadelphia's main post office and headed for Camden, N. J., airport, six miles away. Just six minutes later it landed and to postal officials delivered sacks of mail. Fourteen minutes later it was back on the Philadelphia post-office roof, which had been especially built (in 1935) with take-off ramps (below) and a subsurface heating system to melt ice and snow. The world's first autogiro air-mail service was authorized under a \$100,000 grant from Congress last year, is operated by Eastern Airlines. Now under consideration is similar service linking Philadelphia and New York City.

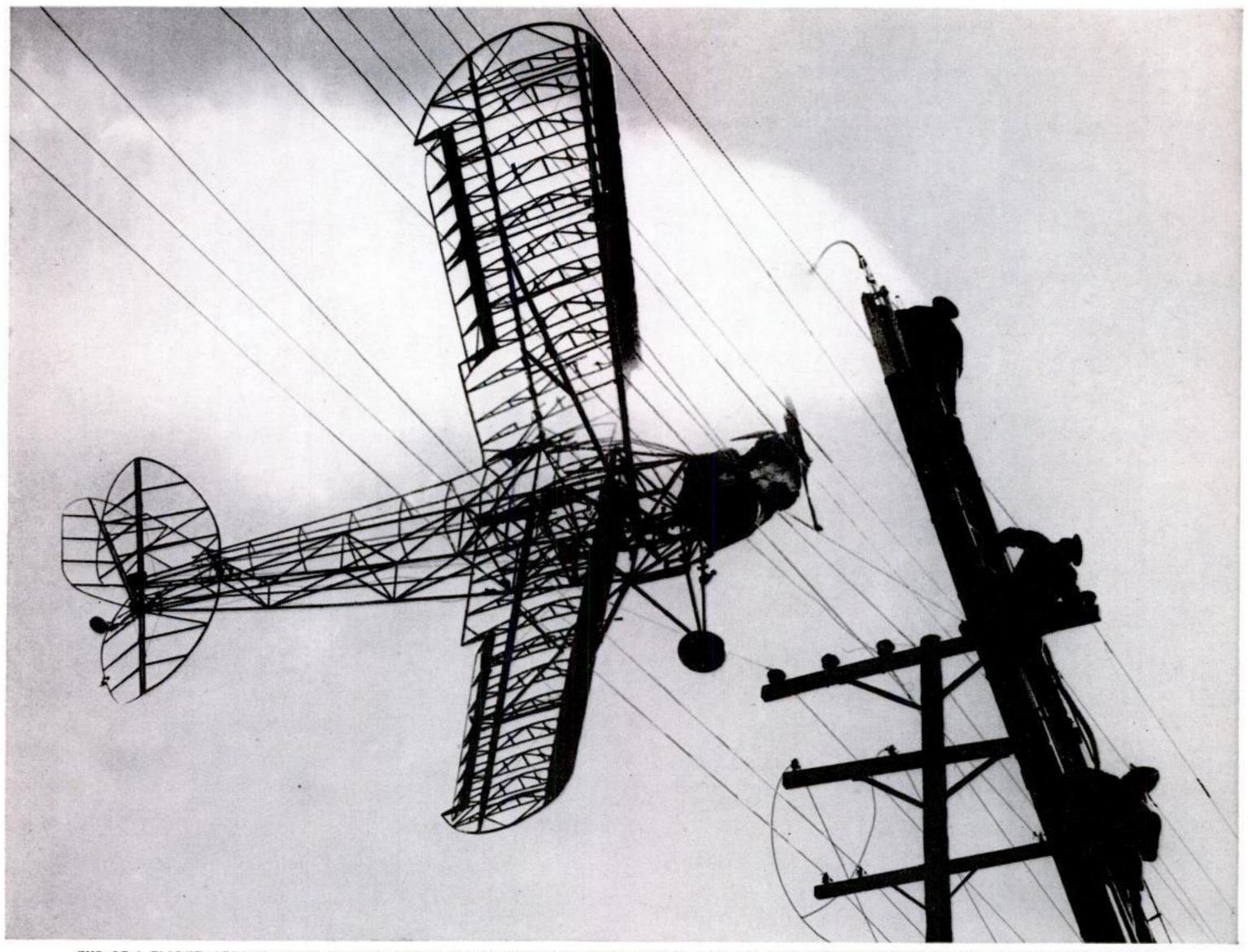


PINOCCHIO DIES IN NEW YORK AS FEDERAL THEATRE DROPS CURTAIN



At midnight on June 30 the fiscal year came to an end and with it the Federal Theatre, which since the autumn of 1935 had produced over 1,000 shows—some hits, some flops—before audiences of more than 30,000,-000. Throughout the country 7,900 FTP employes began looking for jobs. In New York the cast of *Pinocchio*, which had played to packed houses since December, revised the final scene, dropped the curtain on Pinocchio's death (below). After a hysterical ovation the audience poured into Times Square chanting "Save the Federal Theatre." Left behind was the image of Pinocchio, limp and alone beside the stagehands' working light (above).





END OF A FLIGHT: PERCHED ON HIGH-TENSION LINES, THE RED-HOT SKELETON OF SAILOR THOMASSON'S RENTED PLANE IS COOLED BY FIREMEN'S HOSE

SAILOR-PILOT CRASHES INTO POWER LINE, ESCAPES DEATH BY ELECTROCUTION OR FIRE



Luckiest airplane pilot in the world last week was Carl Thomasson, a 27-year-old aviation machinists' mate in the U. S. Navy. On July 5 he flew his plane into a high-tension line and escaped without a scratch even to his uniform from the dangling metal skeleton in the picture above.

Attached to Torpedo Squadron Five, San Diego Naval Air Station, Sailor Thomasson

has a private pilot's license. On an afternoon off he rented a cabin ship at a private airport near San Diego Bay, practiced take-offs and landings for an hour. Coming in too low for a landing, he struck a 12,000-volt power line, sheared off a foot of each propeller blade. His plane nosed down, teetered in the wind, settled back on the wires 50 ft. in the air. Inside the cockpit, Thomasson sat stock still, lest he unbalance the craft, topple to earth. Soon sparks were showering around him. He crawled out, pulled himself hand over hand to the pole, slid to safety. It was none too soon. Flames left only a red-hot frame.

Thomasson escaped electrocution because the impact of the plane caused a short circuit, opened an automatic switch in the main power station. Incidental effect: residential current and the Los Angeles-San Diego radio beam were cut off for 40 minutes. Said Fire Battalion Chief McLarney (inset), "You sure were lucky." Said Sailor Thomasson, "It was my best landing all afternoon."



Up in smoke went the highly inflammable fabric few moments after Thomasson reached ground without a burn, cut, bruise, or even a splinter from power pole.

HALLEA X His Majesty's Secretary of State for Foreign Affairs eats lunch on the train to Geneva and catches up on his European homework

n Europe's "war of nerves" between the democracies and the dictatorships, one of the best sets of nerves today is probably that of the British Foreign Secretary, Lord Halifax. He needs good nerves, because rarely has British foreign policy found itself in a more treacherous quicksand than right now.

Last week Lord Halifax had three nerve-wracking problems on his hands. The least and the most easily postponable was Japan, which was acting as if it wanted to take on Britain as well as China. The second was Adolf Hitler, who was acting as if he had won the last World War. About this Lord Halifax was doing a good deal. He got Prime Minister Chamberlain to advance one step beyond the fine but vague fighting slogan of being against "force" and "aggression" by offering Poland a guarantee against any "unilateral" change in the status of the Free City of Danzig. The assumption is that Nazi Danzig would declare itself in the German Reich; German officials and troops would move into Danzig from East Prussia; the Polish garrison at Danzig would be attacked or disarmed; the Polish Army would invade Danzig; Germany would invade Poland; and Britain would declare war on Germany.

Last week the British House of Commons prepared for that terrible day by moving to send \$300,000,000 in armaments to its little allies-Poland, Rumania, Egypt and Turkey. The trouble is that Lord Halifax and his country are on the opposite side of Europe from these danger points. The solution to all his troubles was last week his third and most crucial problem—an alliance with Soviet Russia.

In openly offering a treaty to the Bolsheviks, Lord Halifax was gambling that the anti-Bolshevik Poles, Rumanians, Finns, Estonians, Latvians, Lithuanians, Swedes, Greeks, Portuguese and Spaniards would not turn from England and make terms with Hitler. But Josef Stalin, most reluctant to join the British and still hopeful of keeping Russia out of the next World War until it is nearly over, was playing coy last week. Halifax's nightmare was that everybody else might quit England and, at the last pinch, Russia might not march.

The third Viscount Halifax, Sir Edward Frederick Lindley Wood, does not stamped easily. He is that unmistakable species—the English gentleman. He is 58, 6 ft., 5 in. tall, quiet-spoken, easy-mannered, grave-faced and incapable of showing any sign of

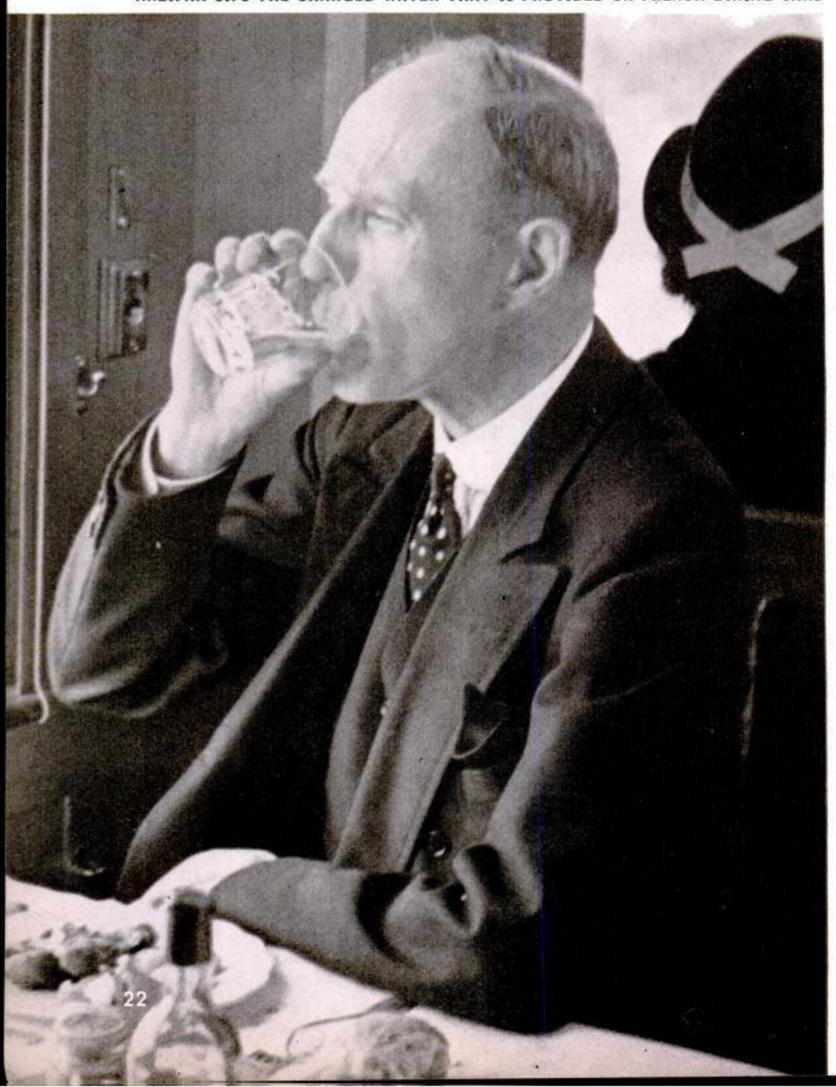


excitement. He has ancestral seats at St. Mary's, Hickleton Hall and Garrowby in Yorkshire. His grandfather was Secretary of State for India under Queen-Empress Victoria. His father was the superpious "first layman of the Church of England" who tried all his life to bring the High Church Episcopalians into the Catholic Church. A fourth son with a withered left arm, the present Viscount saw all three of his elder brothers die before he was 10. He has neither vanity nor fear before God or man. His grandfather died at 84, his father at 94 and Yorkshiremen say he must live to be 104.

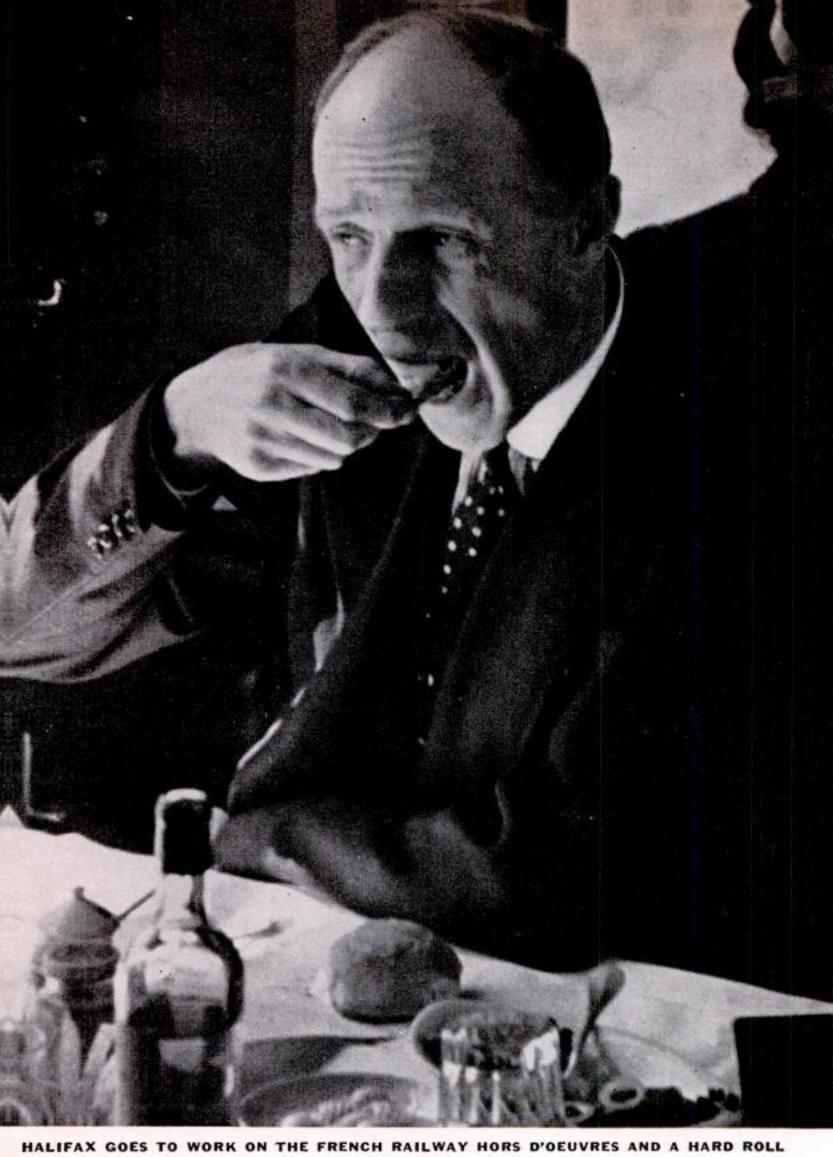
The two least satisfactory periods of his life are the time he was Viceroy of India, and the present. The best was when he was only Master of Fox Hounds of the Middleton Hunt in Yorkshire. He collects ghost stories. He is a third cousin of Anthony Eden, whom he displaced as Foreign Secretary, and both are related to Britain's Foreign Secretary in 1914, the late Viscount Grey of Fallodon.

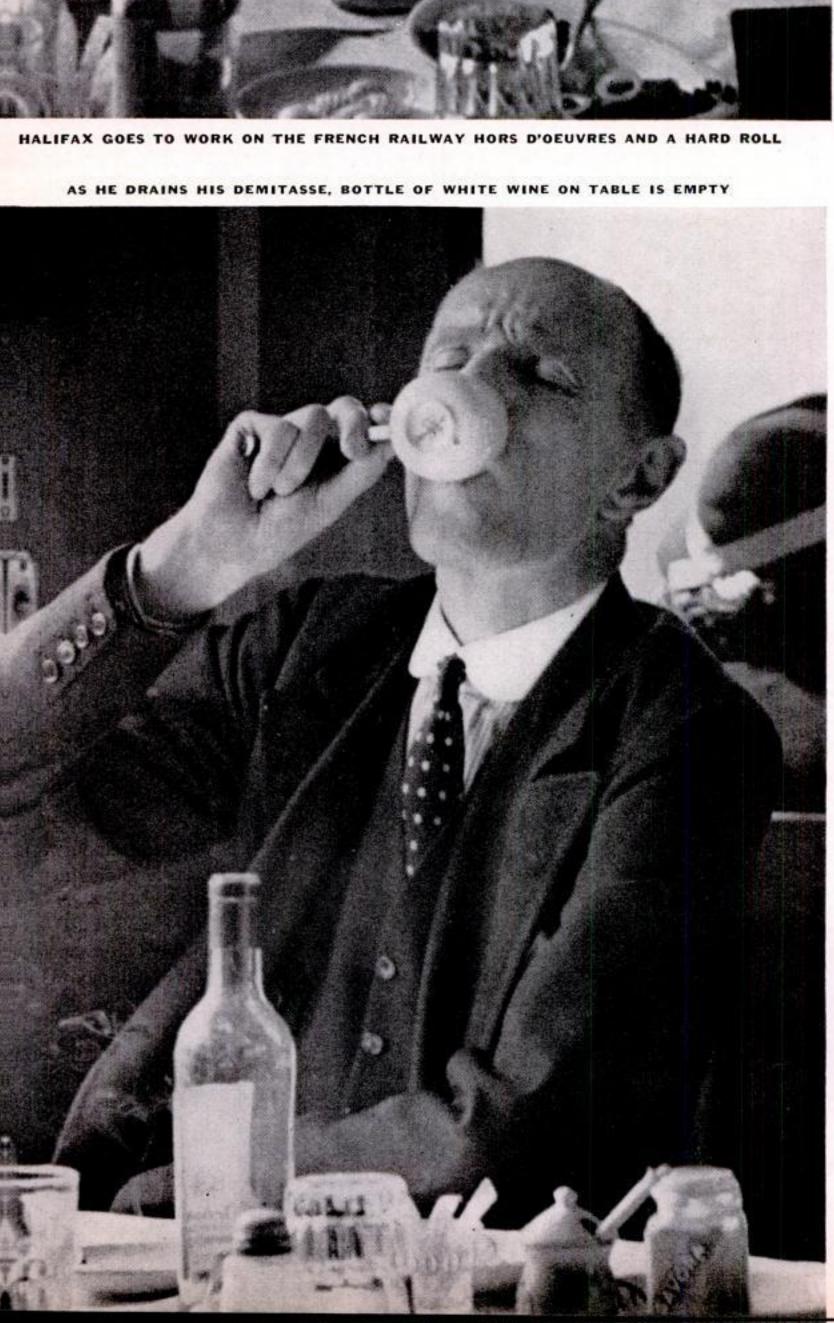
In November, 1937, Chamberlain sent him to Germany to talk to Hitler. Halifax had not then read Mein Kampf. Hitler completely underestimated Halifax and shortly dismissed him. Since then Halifax has ceased to be a champion of Appeasement. He likes and pities the German people but he has concluded that nobody can deal honorably with the Nazi regime. His chief hope is that the democracies can undermine Hitler's prestige with his own people.

Lord Halifax is seen on these pages having lunch on the Boulogne-Paris train on his journey to the last League of Nations Council meeting in Geneva.



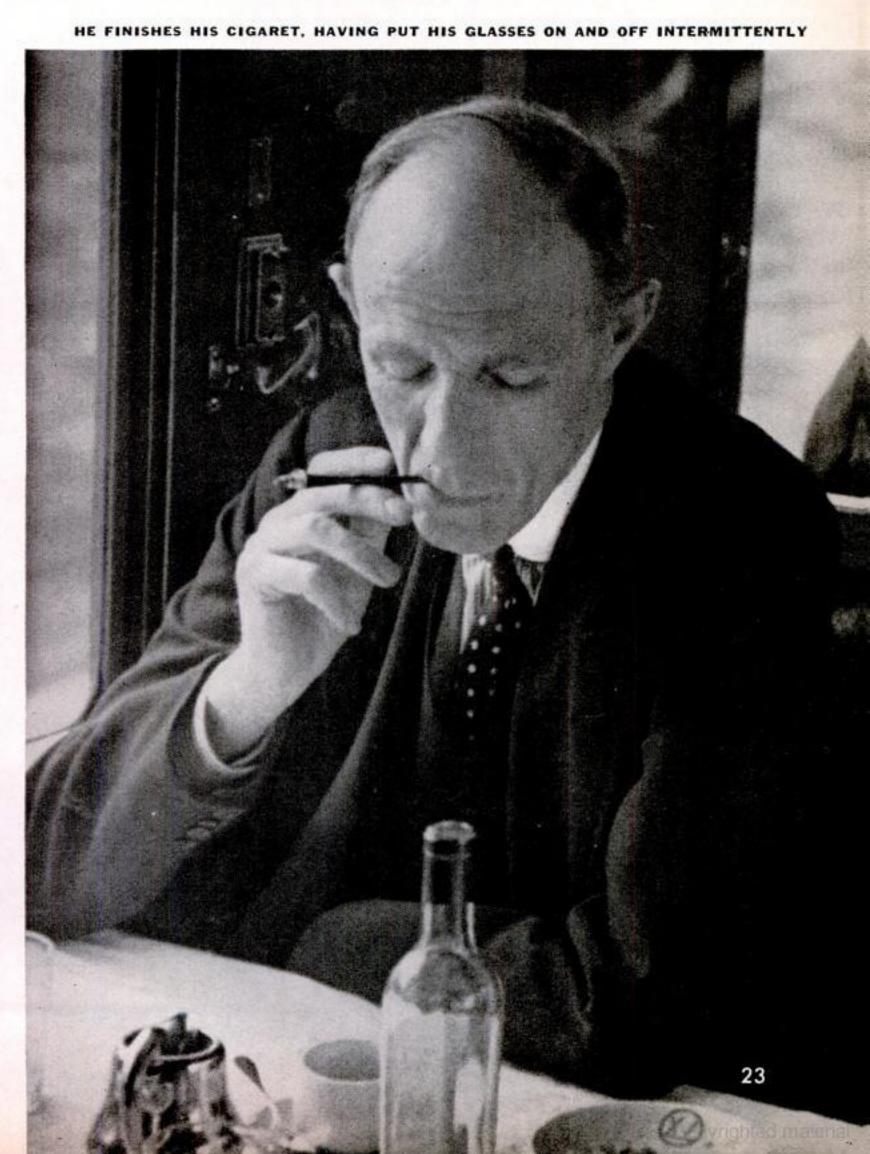








HE DIGS INTO THE FOWL ENTREE WITH KNIFE, KEEPING USELESS WITHERED ARM COVERED



IRISH TERRORISTS' BOMBS CAUSE RECORD DAMAGE FOR ONE NIGHT IN LONDON

une 24 was a night of terror in London. Agents of the illegal Irish Republican Army set off four bombs, a record night for damage done.

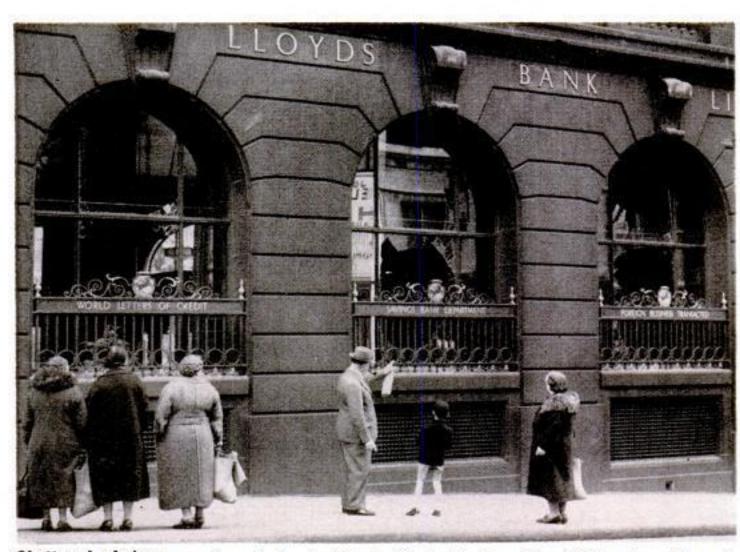
In Piccadilly, where crowds jammed the streets, the first bomb exploded near a cigar store. The blast flattened passers-by and its report could be heard for half a mile. Women screamed and rushed for shelter. Hour and a half later two Lloyds banks and a Midland Bank branch were damaged. Angry English crowds almost lynched a suspect and came near rioting elsewhere. One theater manager told of having seen two men drive up in a taxi and drop a bomb. By morning Scotland Yard had collared four suspects but was still at wit's end trying to stop I.R.A. terrorism, which since January has accounted for over 100 bombing and fire outrages.

Prime purpose of the I.R.A. is to unite Ulster with Eire. Militantly anti-British, it has been illegal for 20 of the last 22 years, is illegal today in Britain and Eire. Its origins go back to the Irish uprising of 1916. It supplies bombs for its terrorists from secret plants, is partly financed by an Irish-American organization, Clan na Gael, or Irish Republican Brotherhood. So clever is the secret organization of the I.R.A. that less than 40 of its terrorists have been sentenced in the last six months.

With typical Irish bravado, it has held annual secret conventions within earshot of Dublin police in: 1) a country mansion, whose owner, a business man, is a secret I.R.A. leader; 2) a dancehall where delegates posed as promoters of deep-sea fisheries; 3) the Glendalough Royal Hotel, where delegates masqueraded as insurance salesmen.



After the night of terror, London Irishmen who proclaimed themselves as "Friends of the Irish Republic" held a peaceful demonstration in Trafalgar Square, heart of London.



Shattered windows were boarded up in Lloyds Bank after bombing. Police thought a gelignite bomb had been hidden in manhole of a sewer by a terrorist disguised as a workman.



Door of Midland Bank on Park Lane (right) was blown across the street by the explosion and a window was blown out (left). The inside of the bank was reduced to a shambles.



Worst damage befell this Piccadilly cigar store. After the bombing a secret I.R.A. radio promised "a fury of destruction on every English city such as would leave it in ruins."



A Scuffle between police and irate Londoners created a hubbub on Park Lane after bombings enraged phlegmatic Englishmen. One man was arrested for disturbing peace (right).

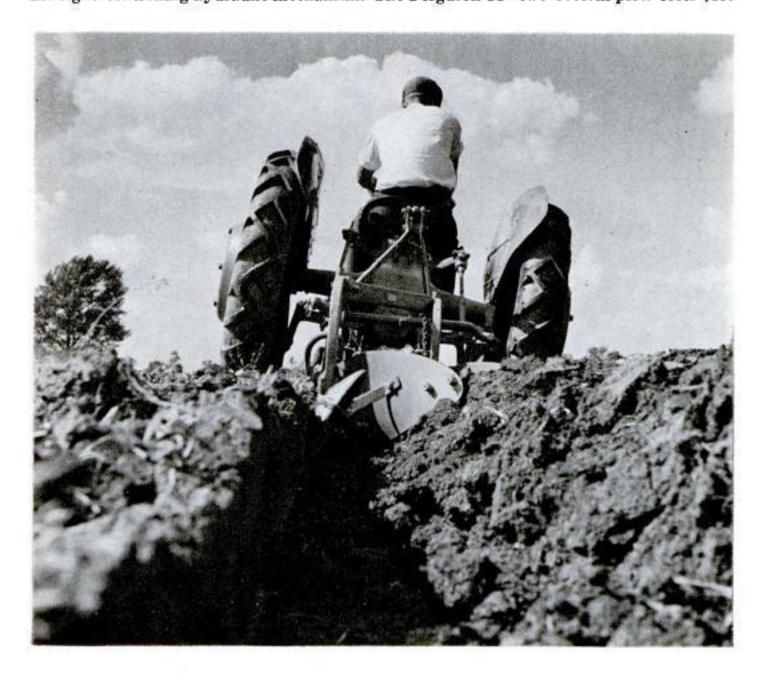
HENRY FORD SETS OUT TO "REVOLUTIONIZE FARMING" WITH NEW LIGHTWEIGHT TRACTOR



To lower the plow into ground, the driver has simply to thrust forward the small lever at his right controlling hydraulic mechanism. The Ferguson 14" two-bottom plow costs \$85.



To raise the plow the driver moves lever backward. When the plow strikes a root or hidden obstruction the driver backs his tractor, raises the plow blade, resumes furrow beyond.





In Dearborn, Mich. on June 29, Henry Ford exhibited before 400 newspapermen and agricultural experts a new mechanized farming unit which he predicted would revolutionize agriculture and "make draft animals economically obsolete." Said he: "It will displace the horse on the farm just as the automobile displaced him on the road." Mr. Ford's horse-displacer, shown above, consists of a small lightweight tractor with detachable implements embodying new tricks of coupling and operation developed by an Irish engineer named Harry Ferguson.

For more than 20 years Henry Ford has looked longingly on the farmlands of the U.S. He marketed his first U.S. tractor in 1918 when Wartime demands for grain had boomed mechanized agricultural machinery. In a single year his Fordson tractor impressively outsold International Harvester's thendominant product. Then General Motors entered the battle. In 1922, Ford cut the price of his tractor from \$625 to \$395. In the tremendous tri-cornered

battle that followed, all three firms lost millions of dollars. General Motors was first to retire from the field. In 1928, Ford gave up and yielded to Harvester the U.S. tractor market.

Now ten years later Henry Ford is again wooing the farmer, this time coactively with the Ferguson-Sherman Manufacturing Corporation. At the debut of the Ford-Ferguson tractor unit, its promoters claimed for it a number of revolutionary virtues: 1) its coupling system so distributes the draft of the plow that danger of upending the tractor is eliminated even on steep grades; 2) the linkage also eliminates the need of excess weight to obtain penetration of implements into the ground, thus reducing rate of fuel consumption; 3) the Ferguson hydraulic control raises and lowers implements by a touch of the driver's hand (above), also automatically holds implements to any desired depth regardless of irregularities in the surface of the land. Price of Mr. Ford's new tractor, \$585-implements and taxes extra.



Harry Ferguson, inventor of Ferguson system of hydraulic controls, demonstrates difficulties of traditional unit.

Paulette Goddard, with teeth clenched, starts the fight in screen version of *The Women* by giving Rosalind Russell

a vigorous kick in the fundament. Thus assaulted, Miss Russell loses her balance and pitches forward on her face.

MOVIE GIRLS FIGHT HARD TO SCREEN "THE WOMEN"

Kicker Goddard vs. Biter Russell

One of the numerous comic climaxes in the stage version of Clare Boothe's play, The Women, occurred when two of the leading characters, both in Reno to get divorced, found occasion to start pulling each other's hair. In the movie version of The Women, currently being made by Metro-Goldwyn-Mayer with Norma Shearer, Joan Crawford and Rosalind Russell in the top roles, this engaging little fracas has naturally received special attention. The rough-andtumble was not shot until after everything else in the picture, so that 1) black eyes or sprained ankles or 2) real enmities engendered by realistic acting would not affect the production budget. Rosalind Russell and Paulette Goddard scratched, bit and kicked their way through seven sets, necessitating eight changes of costume before the sequence was completed in three days.

Screen version of *The Women*, like the Broadway hit from which it was derived, contains no men at all but a male shadow makes its appearance in one sequence. Three actors were tested for their ability to cast it by, presumably, a shadow-casting director.



Norma Shearer ineffectively tries to make angry Paulette Goddard stop hitting Rosalind Russell after she is down.



Rosalind Russell, when finally released, savagely bites Paulette Goddard's left leg. Norma Shearer and Joan Fontaine stand at the left. No punches were pulled in this sequence.



The end of the fight finds Paulette Goddard rubbing her bitten leg while Joan Fontaine leads her away. Rosalind Russell, also rubbing leg, sits up and squeals in tearful rage.

THE MIDDLEWEIGHT CHAMPION

Is a ½-Ton Truck Too Small?

Is a 1½-Ton Truck TOO BIG?



A ½-ton truck is too small for many needs, and often a ½-ton truck is too large. There is a great need for a truck to meet the middleweight requirements.

International has built a ¾ to 1-ton truck to fit the job exactly—the "In-Between" International Model D-15. But International engineers didn't just build up a ½-ton model to bridge the gap—that isn't the way International does things. The D-15 was designed and built especially for ¾ to 1-ton loads. And like all Internationals, the D-15 is an "all-truck" truck made to do a truck's job year in and

year out, with typical International economy.

If you have middleweight loads to haul, put this 3/4 to 1-ton International on your job and cut the needless expense of using a truck that's too big, or one that's too small.

Many thousands of this ¾ to 1-ton truck are on the job today. Dealers and branches operating under this famous Triple-Diamond emblemwill show and demonstrate the "in-between" D-15 at your convenience. Other International sizes, Half-Ton to big Six-Wheelers.

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Designed for saving time, gas, oil, and wear and tear—in traffic, in parking, in alleys. Fast getaway and pickup—fast in all speeds. STAMINA and ECONOMY morning, noon, and night. Wheelbase 130 inches; inside body 102 inches long.



The "In-Between"

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superb springing and shockabsorbing—low center of gravity—low over-all height with AMPLE load space—extra-maneuverable—STAMINA and ECONOMY morning, noon, and night.

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INTERNATIONAL TRUCKS

DAZZLING BRILLIANCE MARKS M-G-M'S COLOR VERSION OF

The Wizard of Oz

To amuse his neighbors' children, a Chicago journalist named L. Frank Baum made a habit, in the late 1890's, of telling them fairy tales of his own invention. Baum's friends persuaded him to write his stories down. In 1900, Bobbs-Merrill published his book, The Wizard of Oz. Since then, The Wizard of Oz has become a children's classic. Fred Stone and David C. Montgomery became famous stars in the operetta version of The Wizard of Oz in which they played as Scarecrow and Tin Woodman for 306 performances in 1903-04. Frank Baum wrote 13 more books dealing with the Land of Oz before his death in 1919. Thereafter the series was carried on by Ruth Plumly Thompson, who still gets out an Oz book every year. About a million copies of the original Wizard of Oz were sold. Sales for the entire series total a little over 5,000,000.

What distinguishes Baum's stories from most such fables are 1) a modern U. S. heroine and 2) absence of any really horrifying ogres, monstrosities or bewitchments. Heroine of *The Wizard of Oz* is a friendly Kansas girl named Dorothy who finds herself in Oz when she gets blown off her uncle's farm by a cyclone. There she encounters a cowardly lion, a tin woodman and a perambulating scarecrow.

Although The Wizard of Oz was not meant to terrify children, it terrified Hollywood by unique production problems. The picture cost \$3,000,000. Shooting lasted from September 1938 until last May. Now completed, The Wizard of Oz will not be ready for general release until this fall.

Characteristic of innumerable dilemmas was that posed by flying monkeys. M-G-M borrowed wings of giant condors from museums, attached them to midgets dressed in monkey suits, who were hung on wires and manipulated from an elaborate control board. As the Cowardly Lion, Bert Lahr wore an 83-lb. costume. When Judy Garland (Dorothy) got a cold, the five-day delay in shooting cost M-G-M \$150,000. Other members of a notable cast are Jack Haley as Tin Woodman, Ray Bolger as Scarecrow.



WHEN DOROTHY AND SCARECROW MEET TIN WOODMAN, HE IS SOMEWHAT RUSTY. SHE SYMPATHETICALLY OILS HIM UP



Arriving in Land of Oz, Dorothy is ecstatically greeted by Munchkins. This is because her house, blown away by cyclone, has fallen on witch-queen to whom they objected.



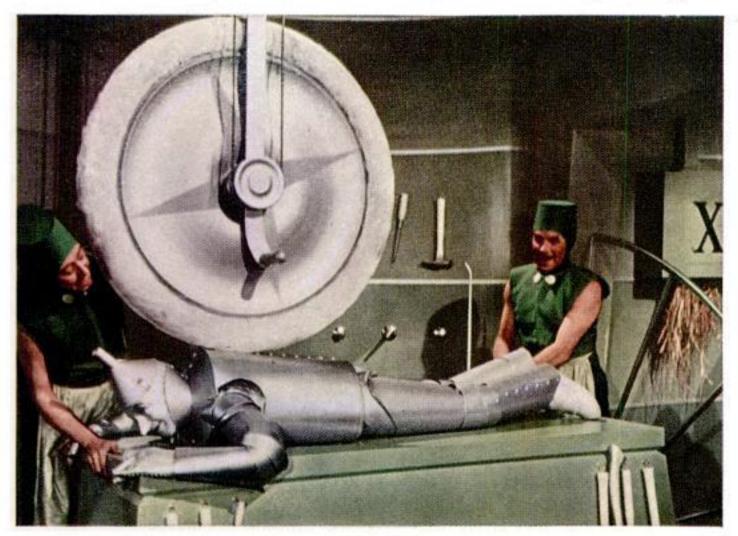
Good Witch Glinda (Billie Burke) explains to Dorothy that the only way she can get back to Kansas is to visit the Wizard of Oz and persuade him to make the proper arrangements.



On way to Emerald City where Wizard lives, Dorothy meets up with Scarecrow, Tin Woodman and ferocious-looking Lion who turns out to be pitifully timid. They proceed together.



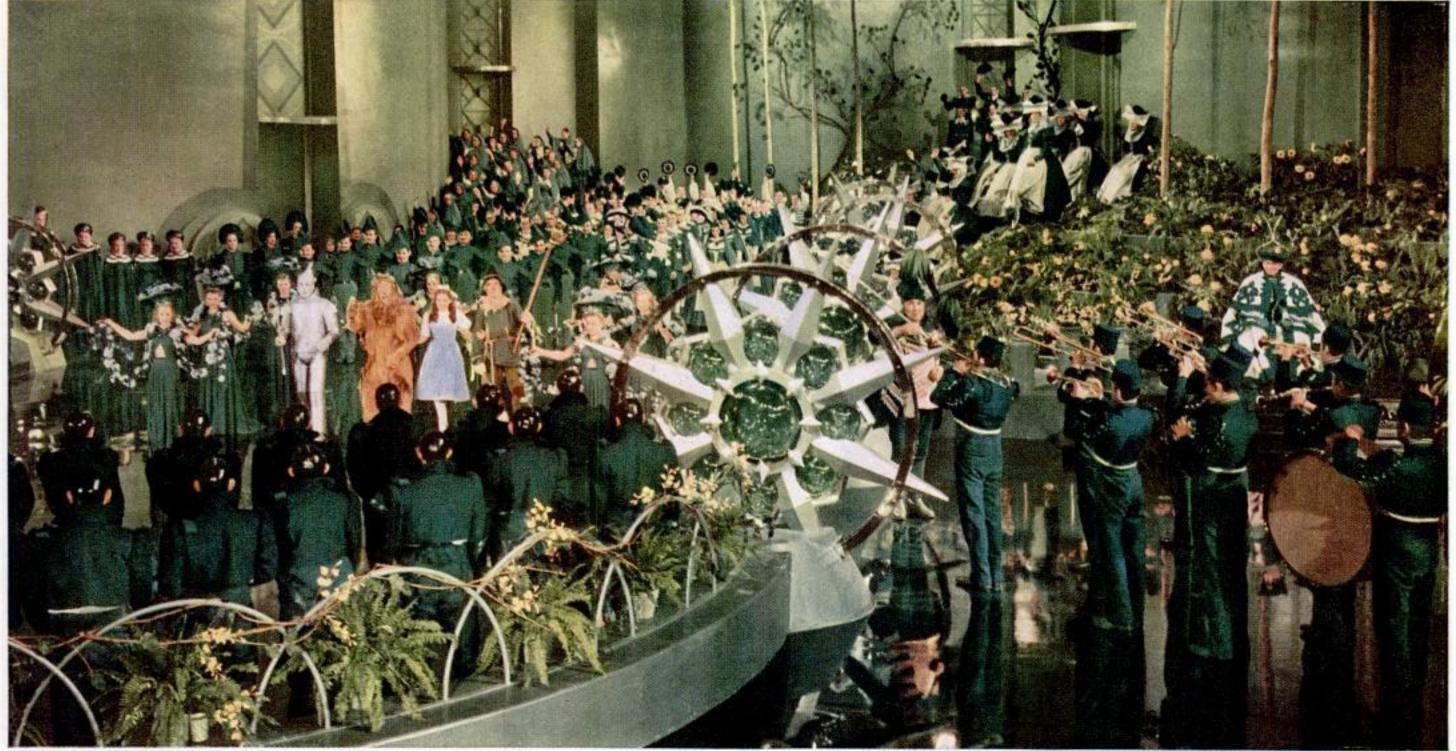
In poppy field near Emerald City, quartet is doped by bad witch, who later uses flying monkeys. She dislikes Wizard intensely, is a bad influence on the countryside generally.



Woodman gets polished before going in to see Wizard. He means to ask for a heart which he lacks. Scarecrow wants brains to replace straw. Cowardly Lion feels the need of courage.



In presence of Wizard (Frank Morgan), Lion, Woodman, Dorothy and Scarecrow are taken aback to hear that, before requests are granted they must bring him bad witch's broom.



EMERALD CITY GIVES QUARTET FINE SEND-OFF BEFORE THEY START JOURNEY TO BAD WITCH'S COUNTRY. THIS SEQUENCE ALONE COST M-G-M \$100,000





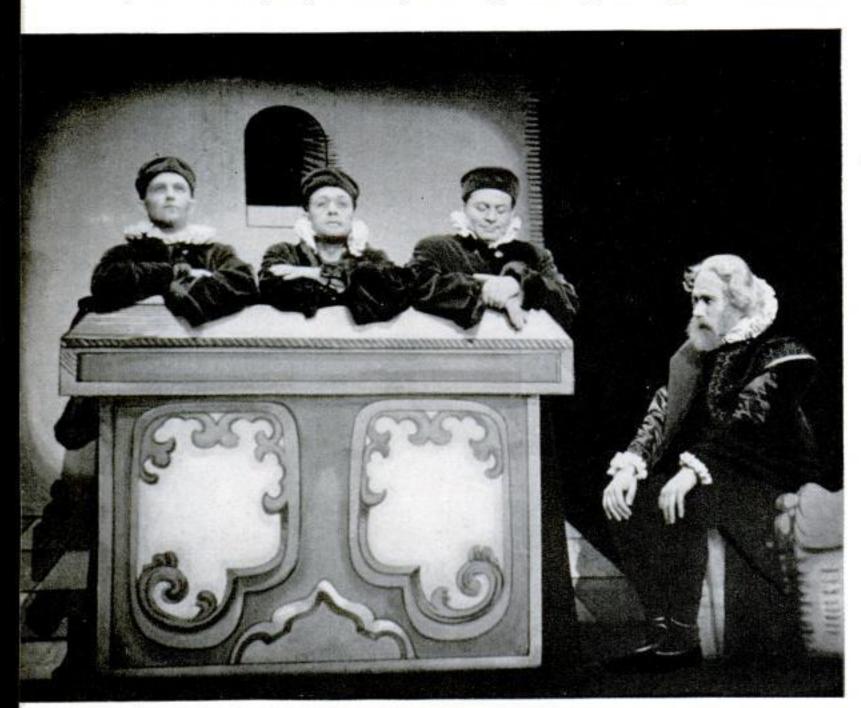


The most vital question of last year to millions of otherwise sensible Americans was who would play Scarlett O'Hara in the movie version of *Gone With* the Wind. When that question was settled by the somewhat unaccountable selection of an obscure, green-eyed English actress named Vivien Leigh, it was succeeded by another equally exciting one: would Miss Leigh do the part justice? Last week a LIFE photographer took this portrait of Miss Leigh as Scarlett. Gone With the Wind is now scheduled to be finished by mid-August, released in late November. When completed, it will run three and a half hours.

VIVIEN LEIGH APPEARS AS SCARLETT O'HARA

THEATER

Journey to Paradise, skit in From Vienna, concerns the trip backward through time of three 20th-Century characters who hope to solve unemployment. When they accuse Benjamin Franklin (above) of starting trouble by discovering electricity, he blames Galileo.



At Galileo's trial (above) trio deplore his theory that earth revolves around sun. Galileo suggests Gutenberg's invention of printing may be the difficulty. Shown a tabloid (below), Gutenberg smashes his presses. Only in heaven do the trio find a sign "Man Wanted."



MUSICAL SHOWS MAKE BROADWAY HITS

Revue from Vienna cellars and a singing star from Brazil lure Fair visitors into theaters

Summer on Broadway, invariably glum, started out more glumly than usual this year. Hoping that World's Fair crowds would swell theater audiences, managers found instead that the theater's regular patrons were swelling World's Fair crowds. Suddenly, in mid-June, Fair visitors began arriving from out of town and Broadway business improved. Their arrival coincided with that of two first-rate musical shows which last week gave indications of playing to crowded houses through the summer. In Streets of Paris, the Shuberts offered an evening of amiable ribald nonsense embellished by pretty girls, good sketches and a colorful new star named Carmen Miranda, imported from Brazil (see p. 34). At From Vienna, which LIFE shows here, a first-night audience which had been prepared to feel merely sympathetic toward a mediocre show found itself instead delighted by first-rate entertainment.

Behind the production of From Vienna lies an amazing item of theatrical history. In 1933, an ambitious group of young Viennese theatrical folk started the Kleinkunstbühne (Little Art Theater) which specialized in gay, satirical revues. The Dollfuss Government, some of whose doings the Kleinkunstbühne saw fit to ridicule, banished the organization from the legitimate stage. Its members retreated to Vienna's beer and coffee cellars where they continued to stage their shows on a sort of clandestine vaudeville circuit. By the time of the Anschluss, the members of the Kleinkunstbühne were already practiced police-dodgers as well as expert entertainers. They smuggled their sketches out of the country, packed their belongings and emigrated to the U. S., where they promptly set about learning the language and supporting themselves by various odd jobs. Their Viennese accents had vanished almost as completely as their resources by the time a dozen backers organized by Mrs. George Kaufman finally formed a pool to put on their show. Lighthearted, literate, well-staged and played with smooth professional sophistication, From Vienna achieves the improbable feat of making New Yorkers believe that legends about the charm of old Vienna may be based on something sounder than seasick waltzes on sustaining radio programs.



Viennese songs like Wien, du Stadt meiner Traüme, and Verlassen bin I, sung by the whole cast of the revue, make an affecting closing number for From Vienna. Jura Soyfer, the talented young author of Journey to Paradise, died at the age of 26 in a German concentration camp.











BROADWAY LIKES MIRANDA'S PIQUANT PORTUGUESE SONGS

Toward the end of the first act of Streets of Paris, a flamboyant young lady wearing a weird collection of brightly-colored beads wriggles through the curtains and proceeds to bewilder the already dazzled audience by a brief collection of preposterous Portuguese songs. Partly because their unusual melody and heavily accented rhythms are unlike anything ever heard in a Manhattan revue before, partly because there is no clue to their meaning except the gay roll-

ings of Carmen Miranda's insinuating eyes, these songs, and Miranda herself, are the outstanding hit of the show. Miranda has been a popular Rio de Janeiro night-club entertainer for several years. Nothing in the Streets of Paris is even remotely Parisian except its inconspicuous straight man, Jean Sablon. Other commendable new features of the revue are the line of show girls and two extraordinarily funny burlesque comedians named Abbott and Costello.

Silence Wins Consent!

"No new refrigerator this year!"
declared Bill. But here's how Mary
got her way because Servel freezes
silently with NO MOVING PARTS



I'LL ADMIT I HAD TO COAX to get Bill "just to look at" a new refrigerator this season! "We bave a refrigerator," he protested, "even if it is as noisy as Sam Hill. Besides, they're all alike anyhow!" "Not this one isn't," I said. "Servel never speaks up. Come on in and see for yourself!"





2 "NOTHING IN THERE TO WEAR or cause noise," explained the salesman who showed us how Servel works. "That's the beauty of it. This tiny gas flame takes the place of moving parts in the freezing system. Servel simply has to be silent. Just listen to it!"



3 "YOU'RE RIGHT—I CAN'T HEAR A THING!" agreed Bill, reluctantly. Then he grinned. "Guess I didn't know as much about refrigerators as I thought I did. Servel certainly is different!" "Yes," said our salesman, "and you'll find this difference saves you money, too! No moving, wearing parts keeps operating cost and upkeep always low!"

LUCKY FOR ME I took Bill to see a Servel
... instead of some other kind! Servel's
silence won him, as it had already won me. And
who could resist a beautiful new refrigerator—
with all the latest gadgets—that actually saves
enough to pay for itself!

Mary and Bill are typical of the thousands who every year are replacing other-type refrigerators with Servel! Today, more than a million families are enjoying the silence and savings of the only "automatic" that freezes with no moving parts.

See Servel Electrolux—at your gas company or neighborhood dealer's showrooms. Learn the whole story. And remember, your own gas company offers prompt service facilities for every Servel it installs.

For Suburban and Rural Homes, Models Run On

BOTTLED GAS, TANK GAS OR KEROSENE

Write for details to Servel, Inc., Evansville, Ind.

FAMILIES WITH OTHER-TYPE REFRIGERATORS ARE CHANGING

... to the refrigerator you hear about but never hear!

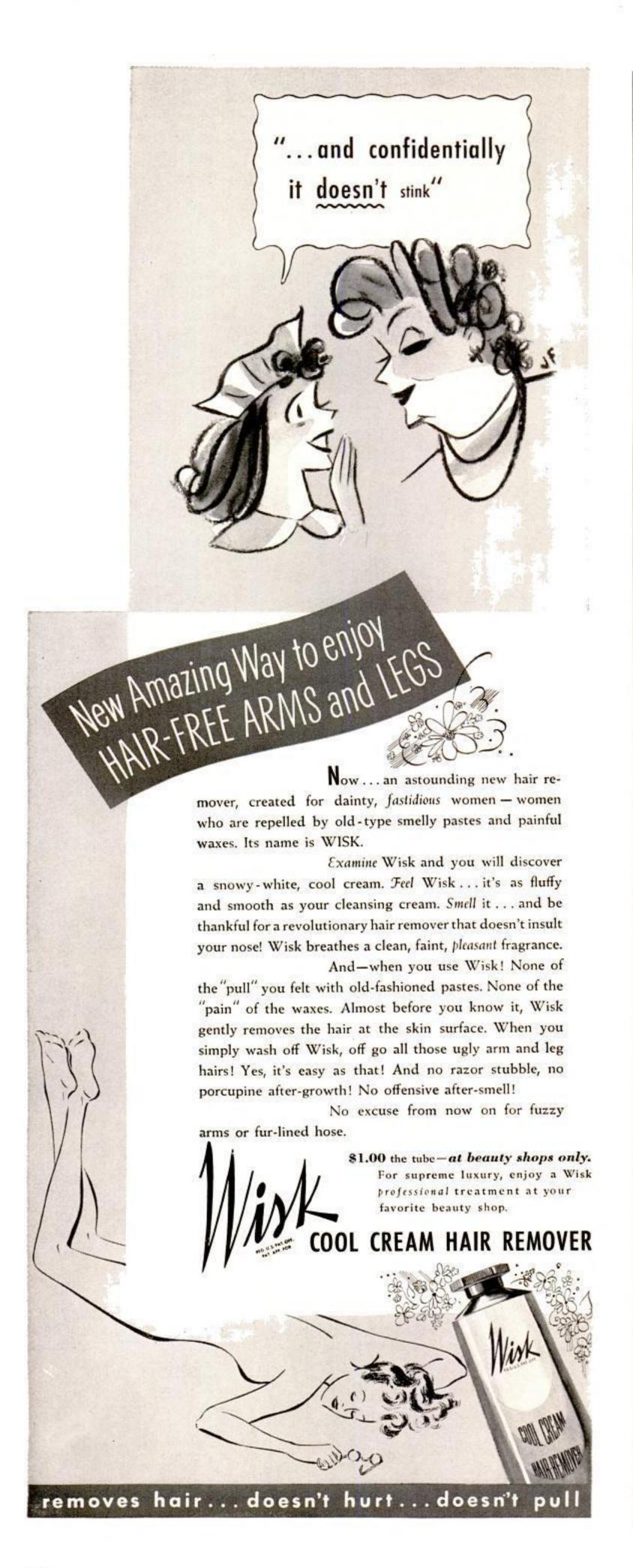


"I don't believe anyone who has ever changed to a Servel Electrolux would ever go back to another kind of refrigerator. You never know it is in the kitchen, it's so quiet."—Dorothy Walter, 1412 North Laurel Ave., Los Angeles, Cal.



"It certainly was a relief to get a refrigerator that was really silent. That was one of the things that counted most in our choice of Servel. We've also found that it keeps food longer." —Mrs. W. J. Cossart, 111 Stoughton St., Dorchester, Mass. SERVEL SERVEL ELECTROLUX Gas Refrigerator

SEE SERVEL'S "MAGIC CAVES OF ICE" AT NEW YORK WORLD'S FAIR—SEE SERVEL AT THE GAS INDUSTRY EXHIBIT AT THE GOLDEN GATE INTERNATIONAL EXPOSITION





\$20 for Mayor LaGuardia in plaster by Warren Wheelock. Walnut (above): \$97.



\$28 buys this Head of a Little Girl in terra cotta, 7 in. high, by Antonio Salemme.

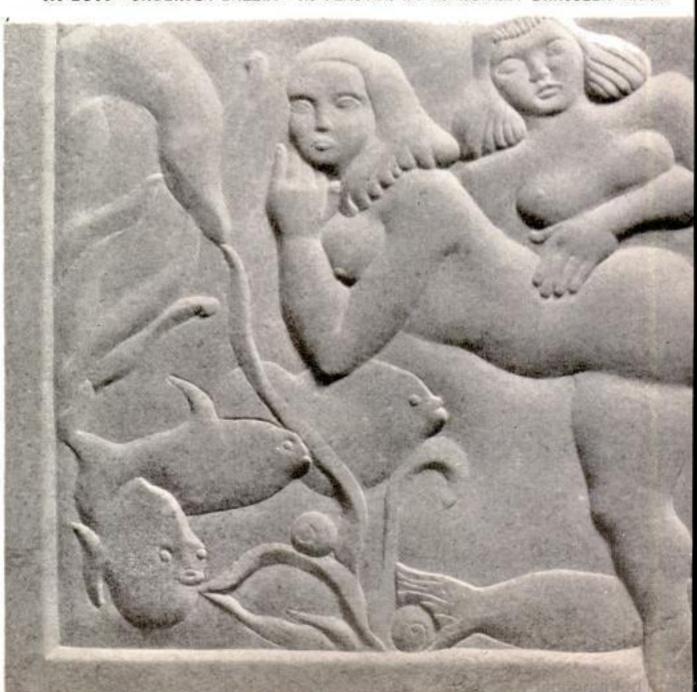
SEST MODERN SCULPTURE SELLS FOR \$10 UP IN NEW "LIMITED EDITIONS"

Until this summer only rich men could afford to buy modern sculpture, and only in big city galleries was it commonly displayed. Most pieces cost from \$100 to \$10,000. But now the Robinson Galleries in New York are selling the works of 14 noted American sculptors at prices ranging from \$10 to \$100. Art lovers can exhibit the works of such men as William Zorach and Robert Laurent on their own mantelpieces.

These new low prices are possible because the Robinson Galleries make from 100 to 300 pieces of each work. Called "duplicate originals," they are sold in "limited editions" like rare books or etchings. Most of them are reproduced like ordinary plaster casts, but are copied with greater care, usually under the personal supervision of the artist. Each piece is sold in a variety of materials. Cheapest is a new hard plaster which is not easily chipped. Others are terra cotta and cast stone, a cement-like mixture of unusual hardness. A few pieces are duplicated in teakwood, walnut and mahogany by a mechanical carving device.

Sculptors will not get rich from such low-priced pieces. But they are glad to have wider recognition and add to the increased supply of fine art now available for American homes.

535 BUYS "UNDERSEA BALLET" IN PLASTER BY MARGARET BRASSLER KANE





\$10 buys Franc Epping's Scrubwoman, 9 in. high in hard plaster. In cast stone it costs \$30.



\$23 buys this Hand Stand, 15 in. high in fine walnut, by Chaim Gross.

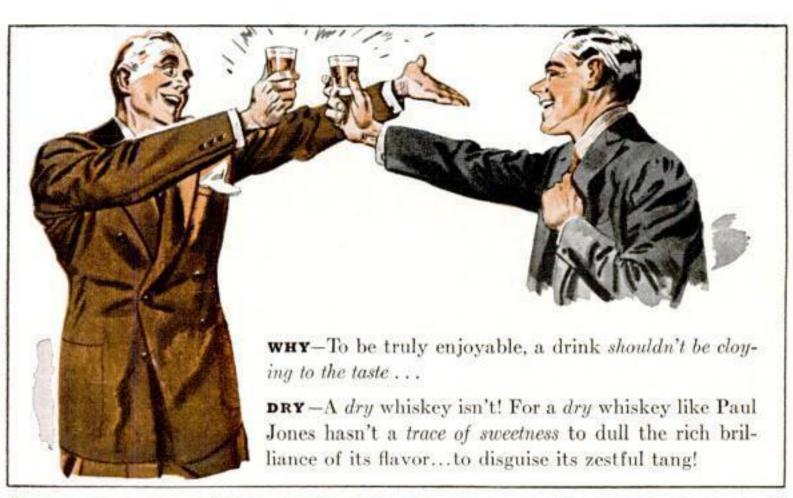


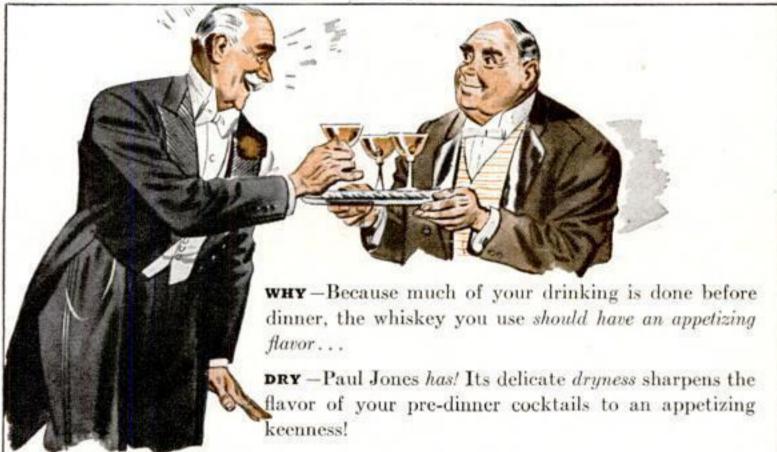
\$30 buys William Zorach's Mother and Child, in hard plaster 15 in. high. In cast stone this work costs \$50. Zorach's sculpture usually sells to collectors for \$500 up.

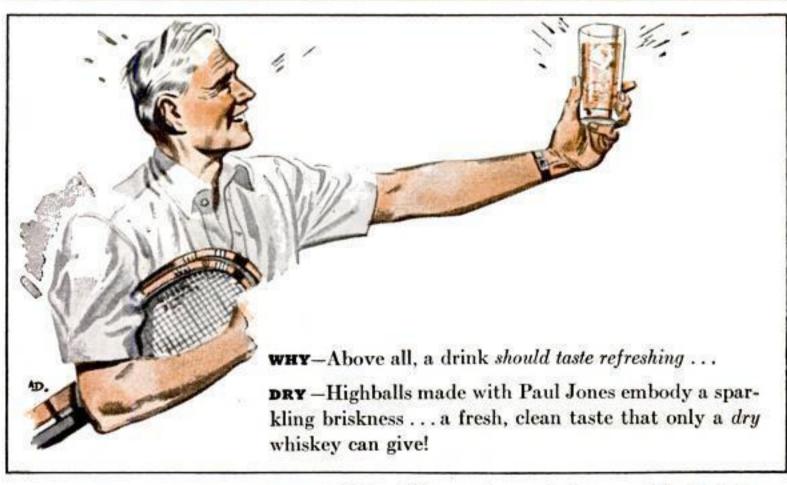
IT IS 30 IN. LONG, HANGS ON A WALL, COSTS \$75 IN CAST STONE



The WITness of DRYness...







You'll find your drinks will taste better, be better with Paul Jones. For when you add the piquant quality of Paul Jones's dryness to its smooth, full-bodied flavor, you have a whiskey that's hard to beat!

Try Paul Jones today . . . at your favorite bar or package store.

Frankfort Distilleries, Inc., Louisville & Baltimore



Every drop is whiskey! A blend of straight whiskies-90 proof.



of the bay in this superb night

aerial photograph, taken with a

about inequitable levies.

powerful flash bomb.

Aerial camera tax maps like this enable asses-Ruins of Chan-Chan, ancient Peruvian city, sors to check construction changes, halt complaints lost for four centuries until identified from air photo showing shadows cast by its foundations. by a veteran aerial photographer

The saga of aerial photography is full of curious and astounding facts. Almost unnoticed by the general public, the aerial camera has changed the destiny of man. It has uncovered lost civilizations, added to the world's known reserves of petroleum, harnessed the forces of nature, softened its disasters, evolved a new method of tax assessment and is rapidly remapping the world.

No science, in so short a span of years, has directly influenced more varied fields of human endeavor. Tremendous things are happening in the air today.

Desperate Parisians took crude daguerreotypes from balloons in the siege of 1870. During the World War the aerial camera reappeared as a vital strategic instrument. The Armistice called a halt to aeronautical development. Fliers



Boulder Dam - from 6 1/2 miles straight up. Made with 9-lens aerial camera (actually 9 pictures in one), it shows

THE BEER THAT MADE MILWAUKEE

Pictures

turned to barnstorming, but aerial photography provided a meal-ticket for peace-time aviation.

The challenge of the flying camera, demanding greater and greater altitudes, inspired the whole air fraternity, resulted in some of its most brilliant triumphs.

In the early days of aerial photography, any old camera would do. Today there are specialized cameras, several hundred times as sensitive as the human eye, regularly taking pictures at a ceiling of 20,000 feet and higher — four miles up.

Detroit can be photographed from Dayton, Ohio. Mt. Shasta, California, showed up nicely in an aerial photograph taken 331 miles away. Engineers in New York, without leaving their desks, have designed a dam in Mexico, calculating vertical elevations and water evels by studying air photographs. With new flash equipment generating billions of candlepower, pictures

can be taken on the darkest night. A strip-map covering an area five miles wide and 100 miles long can be photographed in half an hour.

The modern aerial camera may weigh almost half a ton, require a derrick to low-

er it into its plane, have as many as nine lenses operating simultaneously, contain as high as 5,000 parts put together as precisely as a fine watch. It may be fully automatic and electrically controlled. It's not surprising that some of these mechanical marvels with lenses the size of dinner plates cost as high as \$17,000 apiece. It may interest candid camera fans to learn that films as large

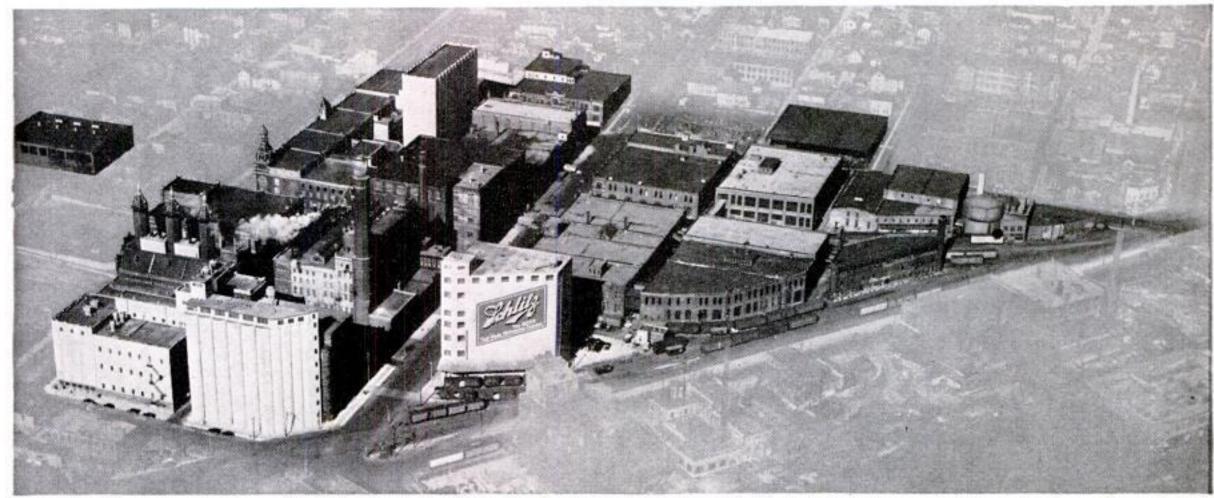


High-altitude pictures enable experts to study and minimize floods, dust-bowl storms, droughts and soil erosion.

as 18 inches wide and 1,000 feet long are sometimes used.

High-altitude photographic ships are practically flying refrigerators. Their heavily reinforced and thickly insulated cabins are built to withstand the intense Arctic cold of the surrounding sub-stratosphere. Even so, temperatures in the oxygen-charged cabins often drop below zero.

The beer that made Milwaukee famous salutes the pioneers who have made America famous in the conquest of man's last frontier—the upper air.



Aerial photo of the World's Greatest Brewery-home of the Beer that made Milwaukee Famous.

Above all...that Famous Flavor

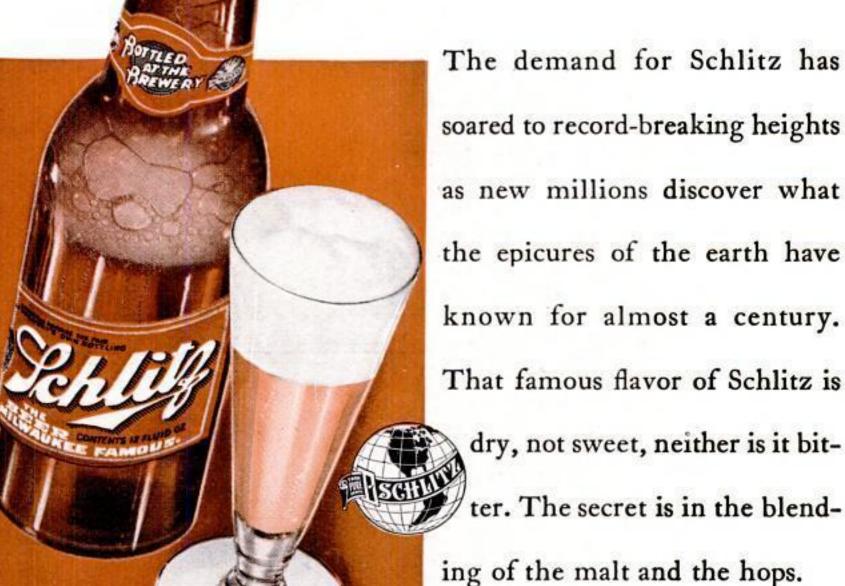
found only in

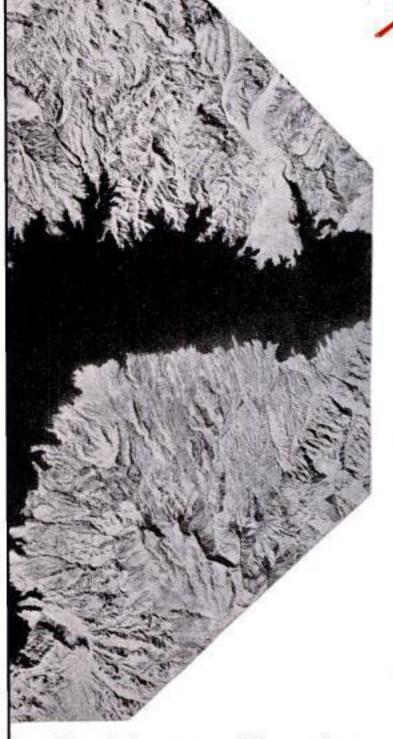
Dry...

NOT SWEET...
NOT BITTER!

That famous flavor of Schlitz comes to you intact in every bottle. Here's why:

The air that sustains life can destroy the flavor of the beer if sealed in the bottle. SO—WE TAKE THE AIR OUT OF THE BOTTLE AN INSTANT BEFORE WE PUT THE BEER IN. An amazing new method that assures you brewery-fresh goodness always. Schlitz pioneers again!





5 miles of the storage lake and 220 uare miles of earth. The "wrinkles" re actually mountains 6,000 feet high.

FAMOUS



Copyright 1939 JOS. SCHLITZ BREWING CO., MILWAUKEE, WISCONSIN

MODERN LIVING

SINGLE-BREASTED SUITS OF MOHAIR-AND-COTTON MIXTURE ARE A POPULAR TAILORED TYPE

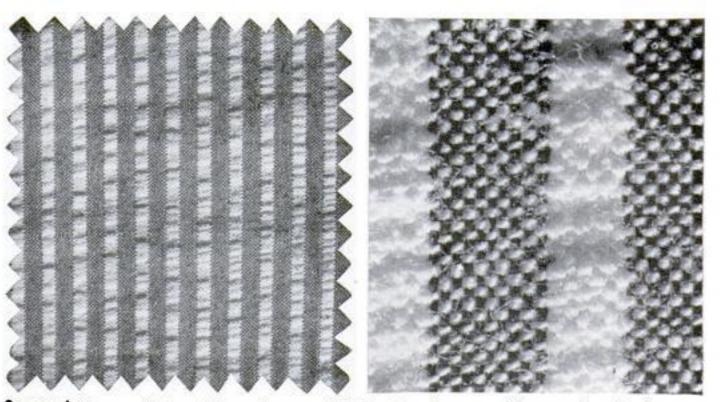
DOUBLE-BREASTED TROPICAL WORSTEDS ARE LIKED BY NORTHERN BUSINESSMEN



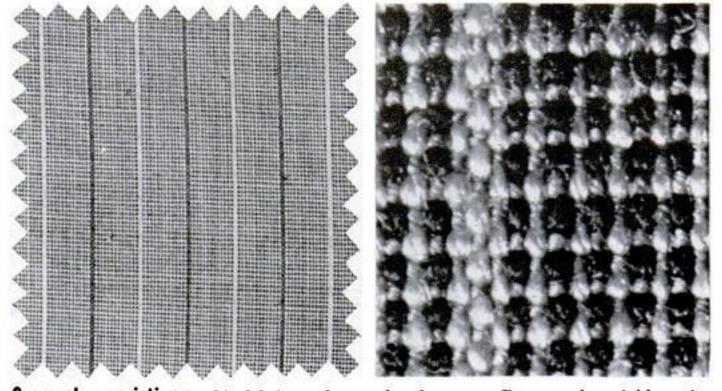
NORTHERNERS SUCCUMB TO SUMMER SUITS

been trying to convince Northerners that Southerners know how to dress for hot weather. As soon as the thermometer starts climbing, Southerners get out their linens and seersuckers, live in them for four or five months. Major obstacle to inducing Northerners to emulate their Southern brethren is the conviction among businessmen that summer suits lack distinction, make an executive look like a tramp. To overcome this, clothiers set their best designers to the task of styling men's summer suits, while fabric manufacturers concentrated on new weaves. Result is that the summer of 1939 finds all kinds of summer-suit fabrics on some of the most conservative Northern backs.

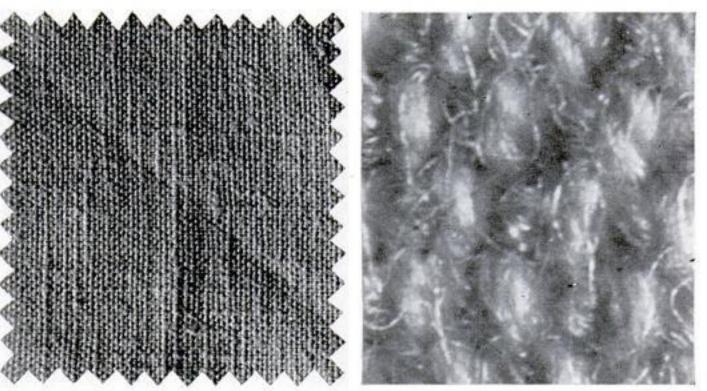
Men's summer suitings fall into five categories: cottons, worsteds, rayons, linens and silks. The desired qualities are lightness, porosity and resistance to wrinkling. On this and the following pages are swatches and microphotos of nine summer fabrics.



Seersucker, one of the oldest of cotton fabrics, has been used for men's suits for centuries. Microphoto at right shows how highly porous it is. Fabric is also lightweight, washes well. It is popular in South but Northerners balk because it looks unpressed.

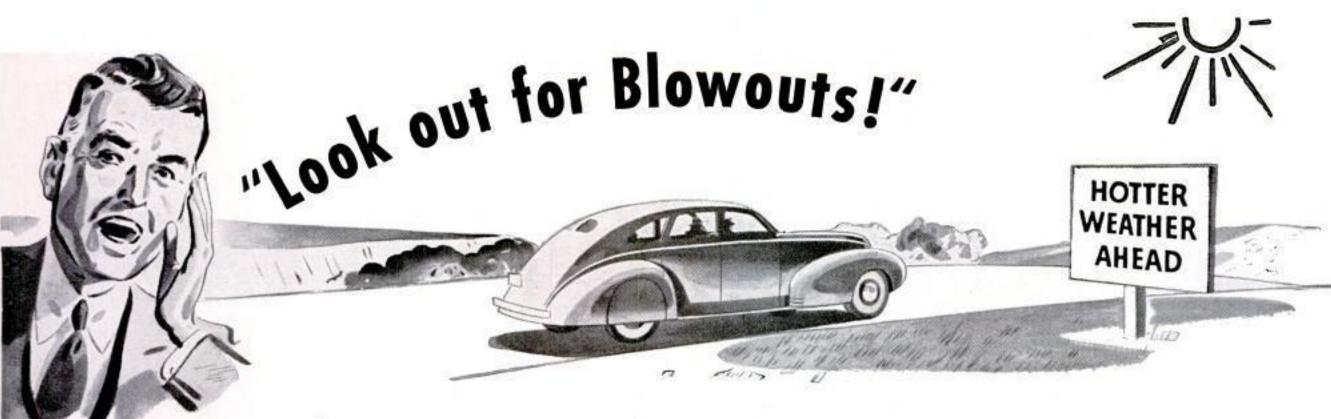


Seersucker variation is this fabric made mostly of cotton. Because the crinkly stripe of the classic seersucker has been flattened out, the finished garment achieves a much more tailored appearance. A size 38 in most types of seersucker weighs about 25 oz.



Angora, mohair and cotton are woven together to make Palm Beach cloth. Lightweight and wrinkle-resistant, it is used the world over for men's summer suits. Tests show that it has 1,600 tiny windows to every square inch. A suit of this fabric weighs 31 oz.

CONTINUED ON PAGE 42



Get the better protection of this revolutionary

SEIRERING





BUILT ON 3 ENTIRELY NEW SAFETY PRINCIPLES

1. Patented "Heat Vents" eliminate the cause of many blow-outs.

Other brands may claim blow-out protection but THIS is the only tire on the market that actually EXPELS the heat that causes tire explosions! As the tire strikes the road the vents close-exhaling hot air. As the tire leaves the road they spring open-inhaling fresh, cool air. (See sketch at right). This cooling of the tire's vitals not only removes the cause of heat blow-outs, but makes the tire last longer, because cool rubber wears slower. LET YOUR SEIBERLING DEALER DEMONSTRATE THIS EXCLUSIVE FEATURE!

2. Sharp "Saw-Tooth" tread gives surefooted traction month after month.

As quiet as a black leopard when you're rolling along, this unique tread turns into thousands of clawing fingers the moment you put your foot on the brakes. And being as sharp at the bottom of the tread as they are at the top these remarkable saw-teeth give you the same, quick, safe stops after many thousands of miles as when the tire is new. ONE RIDE WILL PROVE THE EXTRA SAFETY MARGIN OF THIS TREAD!

3. New high resilient "Saf-flex" cord resists shock-makes tire ride like a cloud.

Here is the "tops" in protection against chuck holes, curb bruising and road hazards. Because Seiberling's exclusive "Saf-flex" cord has TWICE THE ELASTIC

STRENGTH OF ORDINARY CORD, the body of this tire can absorb terrific punishment without suffering an internal carcass break. To you that means greater safety and more mileage per dollar. Protect



yourself with the greater security of this DIFFERENT tire during the dangerous blow-out season. ONLY A RIDE CAN DO JUSTICE TO THE CLOUD-RIDING EASE OF THIS TIRE. TRY IT.

See your local newspaper, or ask your Seiberling dealer for his special 4-for-3 money-saving plan. (This is a special offer good only July 13 to 31st inclusive.)

THE SEIBERLING RUBBER COMPANY · AKRON, OHIO, U. S. A. · Seiberling Rubber Company of Canada, Ltd. · Toronto, Canada

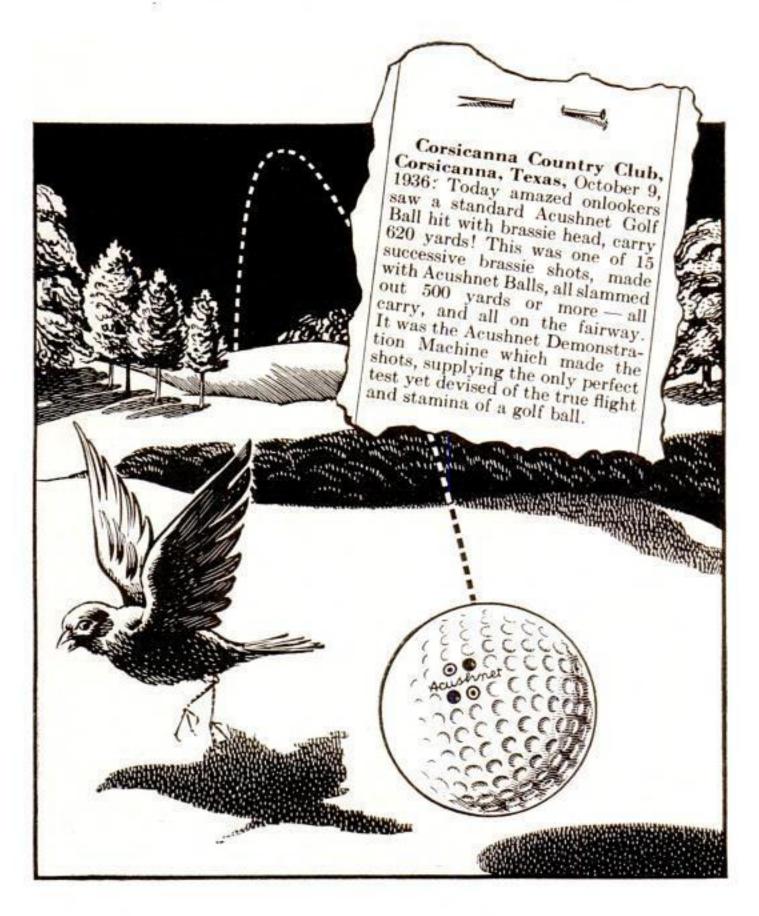
NOW IS THE SMART TIME TO TRADE YOUR PRESENT TIRES FOR THESE SAFER SEIBERLINGS

BECAUSE IT'S

"HEAT-VENTED"

POINT OF MAXIMUM

Makes 620 Yard Brassie Shot!



Machine was scientifically designed to assure perfection — of swing and timing. But this perfection would count for nothing if the ball hit were not also perfect — accurate, tremendously long, and durable. Time after time Acushnet Balls have proved that they can stand the smashing hit of this superhuman driver, that they have the assuming and accuracy which gounts even more when human

This year switch to Acushnet

hands are at the other end of

The Acushnet Demonstration Balls. Sales are increasing by the Machine was scientifically dehundreds of thousands without signed to assure perfection—of ballyhoo or endorsements—sheerswing and timing. But this ly on playing merit. Ask your Pro.



GOLF'S GREATEST HIT SHOW

The Acushnet Demonstration Machine tours the country annually to prove that Acushnet Balls are built for winning golf. 300 . . . 400 . . . 500-yard drives; 150-yard chip shots dead to the pin! Then X-rays of these same balls — guillotine tests — compression tests to prove Acushnet Balls can take it.

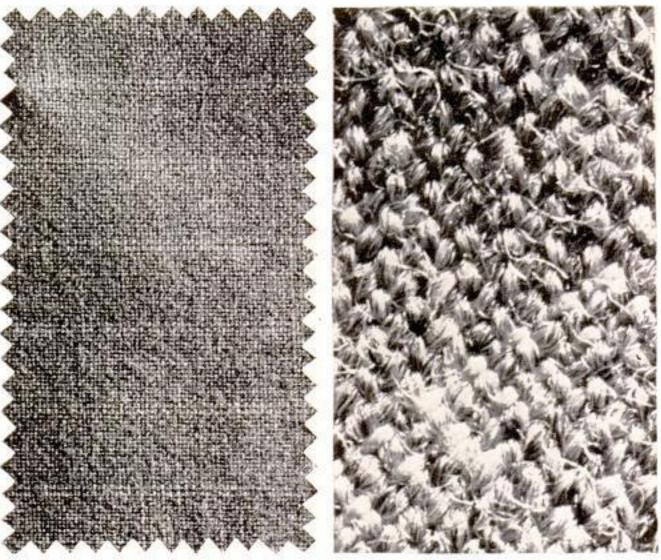
ACUSHNET Goff BALLS

SOLD ONLY THROUGH PRO SHOPS

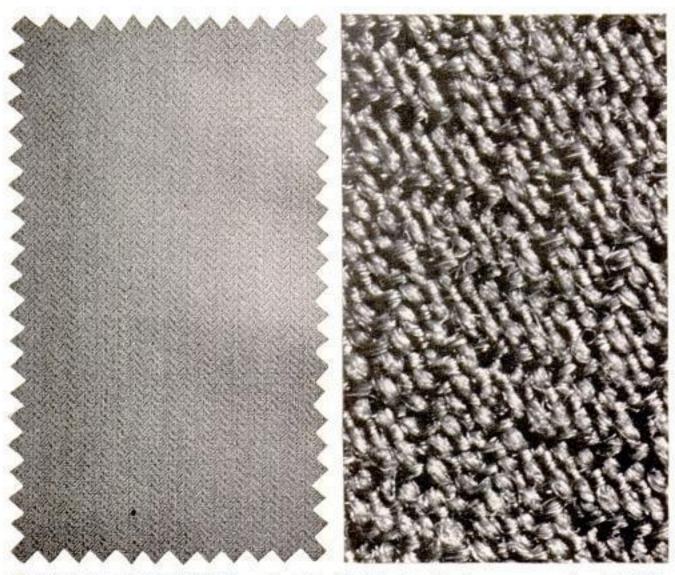
Titleist 75e
For Experts Only

the club.

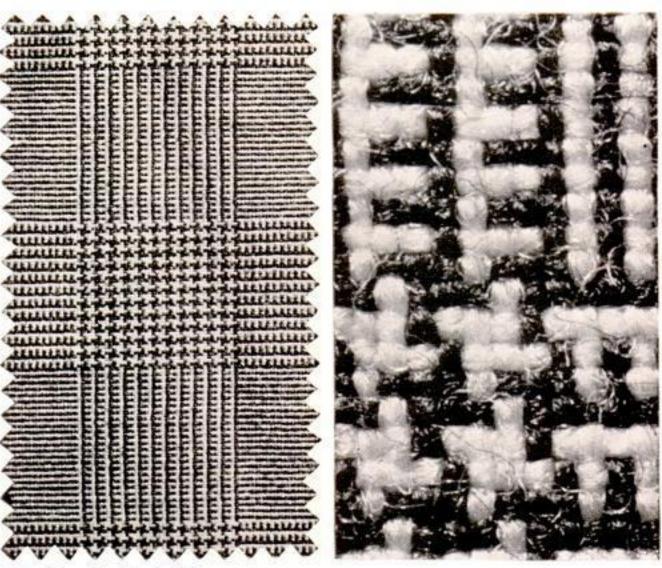
Bedford 75c The ball that can take it Green Ray Pinnaele Summer Suits (continued)



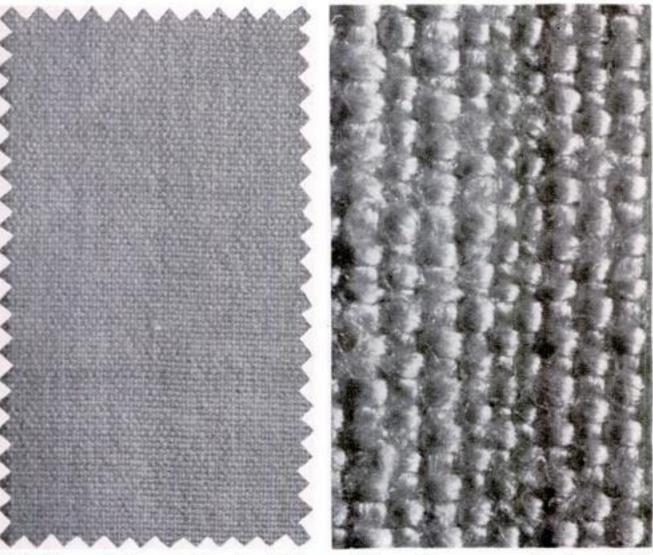
Tropical worsted is a more formal summer-suit fabric. It is of finespun wool, 10 oz. lighter than the average wool suit. It is crease-resistant, cool and has a porous weave. It has the appearance of an all-year-round suit, costs from \$12.50 to \$70.



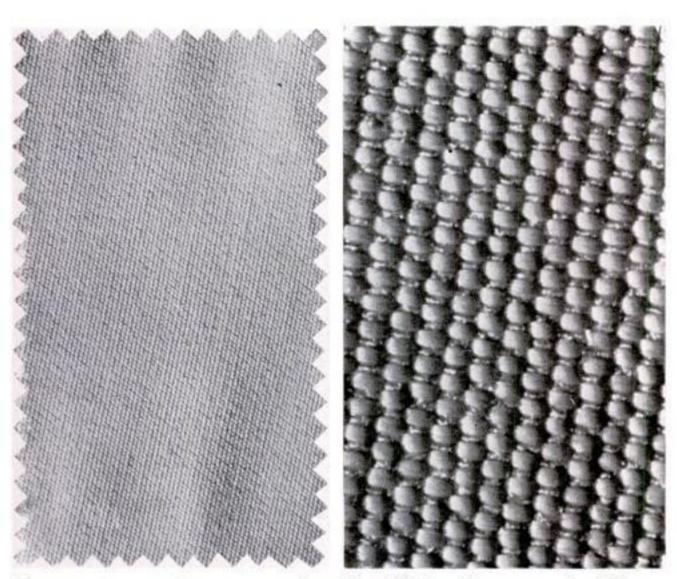
Worsted and mohair mixture make this fabric in herringbone weave. A suit of this weighs about 36 oz., including its skeleton lining (quarter-lined body and lined sleeves). On the market for the past 19 years, this is still a very popular seller.



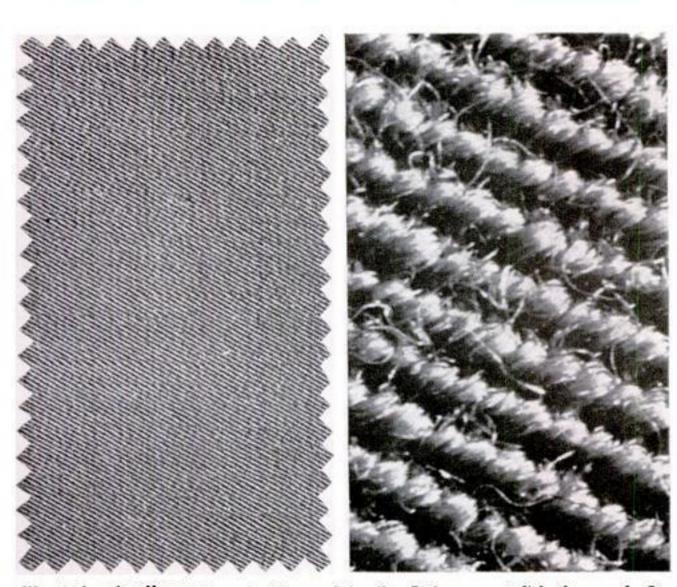
This Glen Urquhart plaid, another version of tropical worsted, is relatively heavy. A suit weighs 42 oz. This material sells best for city business suits. Microphoto at right shows details of the intricate weave. A suit of this material costs \$25.



Linen is one of the most absorbent fabrics used for making summer suits. A vegetable fiber, it wrinkles easily and hasn't the spring of an animal fiber. Irish linen suits weigh 34 oz. Linen suits, less popular now than a few years ago, cost from \$10 to \$45.



Rayons and rayon mixtures account for only 2.3% of men's summer suits. This tussah silk and acetate is considered luxury fabric, is most popular in light shades. It drapes well. Unlike linen, its wrinkles come out overnight but it is not washable.



Worsted gabardine belongs to the wool family. It is more stylish than cool. Its threads are tightly woven, nap is closely sheared. Gabardine doesn't wrinkle easily, wears a long time. Gabardine suits weigh about 33 oz., cost from \$19.75 to \$80.

GIN QUIZ No. 5 Questions and Answers that will belp you make better Gin Juleps By JOHN T. FITZGERALD Chief Instructor, Bartenders School, Inc. **New York City**

Should the mint be crushed in making a Gin Julep?

This is the question that has launched thousands of arguments, but the answer is "Yes"-if you want the soulsatisfying julep that transforms men into poets!

Do I need a silver julep cup to make a perfect Gin Julep?

No-a tall glass will do, but you must use a perfectly smooth, balanced-flavor gin. Better use Hiram Walker's and take no chances!

How do you frost the glass?

By filling it with shaved ice, then setting it in an open window before pouring in the liquid. The julep should stand five minutes.

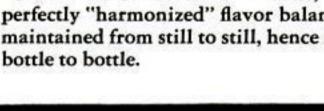
When was the "Gin Revolution"?

300 years after the discovery of gin, Hiram Walker revolutionized distilling with a new discovery that, for the first time in history, produced a perfectly uniform gin with a perfectly "barmonized" flavor.

How is "Harmonized" Flavor attained?

The flavor strength of each ingredient that goes into Hiram Walker gins is scientifically measured so that no single flavor will be too strong or too weak. Then, thanks to Hiram Walker's famous "Controlled Condensation Process," this perfectly "harmonized" flavor balance is maintained from still to still, hence from bottle to bottle.

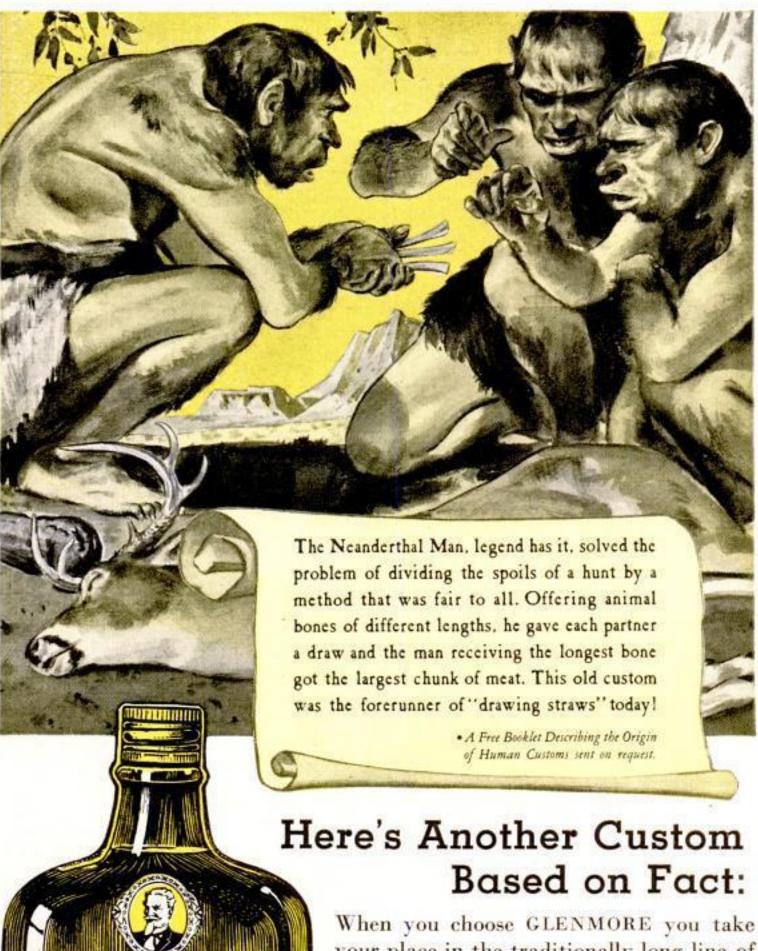






NO. 14 of a series: FACTS BEHIND OUR HUMAN CUSTOMS

Do you know why WE DRAW STRAWS?



your place in the traditionally long line of knowing men who are discriminating judges of fine whiskey. This Kentucky Straight Bourbon is a famous whiskey, distilled with pride from choice grains and deep-well limestone water-aged with patience for 3 full years in new barrels of white mountain oak.

Glenmore ... you get more Copr. 1939, Glenmore Distilleries Co., Incorporated

Gold Label-100 Proof Silver Label-90 Proof OTHER GLENMORE PRODUCTS .



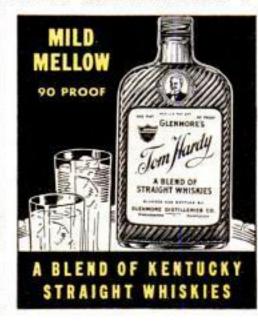
Glenmore

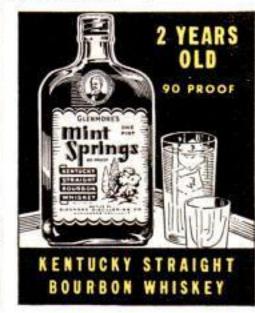
KENTUCKY

Straight

Bourbon Whiskey

Glenmore Histilleries Co.





NATURAL HISTORY

A CHILDLESS TEXAS COUPLE ADOPT A BABY CHIMPANZEE BORN IN A ZOO

Molan Jesse Nagel is a baby chimpanzee that has been Nadopted by Hans Nagel, keeper of Houston's Hermann Park Zoo, and his wife. The baby was born on June 5. His parents, Jerry and Patsy Chimp, came from the jungles of Africa and met at the Fort Worth Zoo. The regulation birth certificate that the Nagels have filed for Nolan Jesse says he is "legitimate."

Nolan Jesse is one of the few chimpanzees born in captivity to survive. Patsy Chimp, his mother, was bought recently by the Hermann Park Zoo from the Fort Worth Zoo where she was known as a mean old maid. She deserted her helpless son after a few hours. Zookeeper Nagel then snatched the baby out of the cage and took him home to his childless wife.

The frolicsome chimp is now enjoying himself immensely. He is being brought up like a regular baby. The Nagels plan to go through legal adoption proceedings. They have turned the den of their home into a nursery and Nolan Jesse sleeps there in a bassinet. He wears diapers and has learned to cry when he needs fresh ones. The hit of the Nagel household, he is so popular that a steady stream of visitors comes to see him.



A beautiful sleep descends upon the week-old chimp, who slumbers with his arms wrapped around his head as many people do. He sleeps three-fourths of the time.



Childlike amazement fills the chimp's face as he learns to walk by holding on to Mr. and Mrs. Nagel with his hands while wildly trying to take steps with his feet.



Dangling from a tape measure is like swinging from a limb in the jungle to this chimp who is a natural-born comedian. He was two weeks old at time of this photo.





Peake, too, recommends

Chessie's plan of

TRAVEL DIVIDENDS



Peake, the head of Chessie's family, would have a word with the head of your family...on the subject of getting more fun out of

travel. Chessie's Old Man endorses the principle that to collect your Travel Dividends—those extra rewards of travel—you should "Go the most interesting way—Go Chesapeake and Ohio."

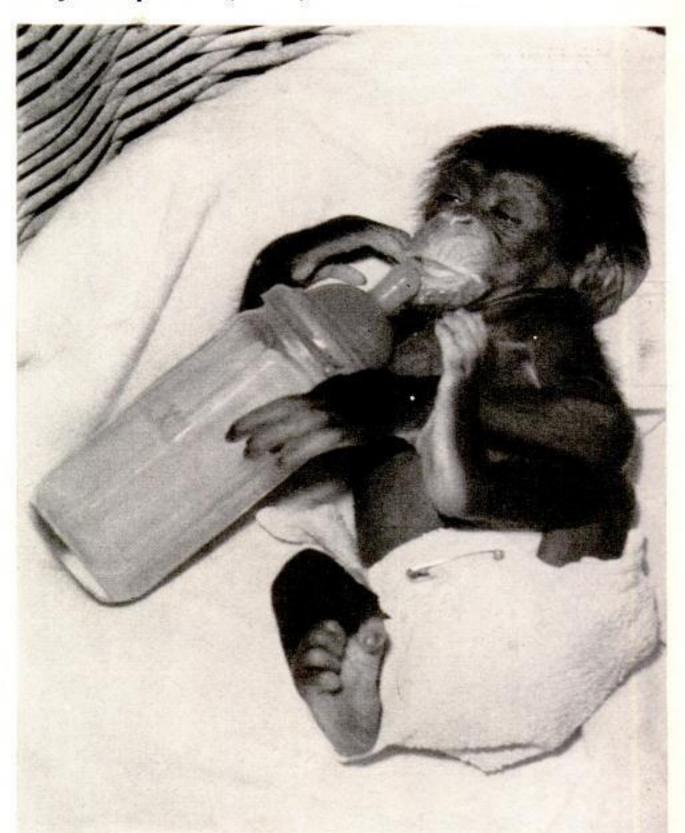
On this famous east-west route there's so much more to see and do...scenic glories of mountain, valley and rugged canyon—no two miles alike...fascinating stop-overs in historic cities and towns that were settings for the great Drama of America, from Colonial days to the present.

Before you plan an eastward or westward trip to one of the World's Fairs or other destination—

Send for your free copy of "CHESSIE'S TRAVEL DIVIDENDS" which describes a number of trips of one, two or more days in *The Chessie Corridor*, combining exhilarating travel by train and ship with interesting stop-overs that pay you rich dividends in memorable experience. Write for "Chessie's Travel Dividends" to Passenger Department, Chesapeake and Ohio Lines, 829 East Main St., Richmond, Va.

CHESAPEAKE AND OHIO LINES

Baby Chimpanzee (continued)



Jesse's regular baby's milk bottle is almost as big as he is. He uses a foot to support his hand in holding up the bottle. He is fed a specially prepared baby's diet.



An 11-month-old girl is completely baffled when it suddenly dawns upon her that the chimp is alive. The chimp, more worldly, goes on sleeping without concern.

Mayonnaise



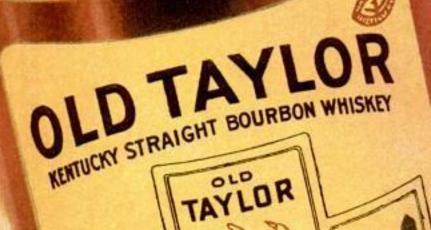
Copr. 1939 by Kraft-Phenix Cheese Corporation

Americas Hull

Acclaimed through 50

O strangers to World's Fairs are these four illustrious whiskies. They were the toast of America before the Ferris wheel turned at Chicago's World Columbian Exposition in 1893, and colordrenched fountains played nightly in the Court of Honor.

These whiskies are today what they have been for more than a half-century—fine beyond question and first in public esteem.



NOTTLED IN BOND UNDER SUPERVISION OF U.S. GOVERNMENT

THE OLD TAYLOR DISTILLERY COMPANY LOUISVILLE, KENTUCKY (SUCCESSORS TO E. H. TAYLOR JR. & SONS. INC.)

UNDER U.S. GOVERNMEM "Taylored" to Good Taste OF NATIONAL DISTILLER

Head of the Bourbon Family

MENTUCKY STRAIGHT

SOTTLED IN BOND UNDER SUPERVISION OF

BOURBON WHISKEY

THE OLD GRAND DAD DISTILLERY COMPANY

LOUISVILLE, KENTUCKY.

Miskells

the proud place they hold springs from an excellence common to all products which, like them, have won signal distinction at World's Fairs of the past.

each of this quartet is marked by a rare and distinctive flavor all its own, ealously maintained from generation to generation.

Fourmost" in character and popularity, these whiskies now are priced within basy reach of anyone partial to fine old "bonded" liquors

BITTO THE PROPERTY OF THE PARTY OF THE PARTY

World's Columbian Exposition, Chicago, 1893 Copyright 1939, National Distillers Products Corporation, New York

Mount Vernon Straight App Thiskey Under Supervision of # S. Conti. Bottled in Bond The Mount Vernon Distillery Company

UPERVISION and the EMBLEM OUR GUIDE TO GOOD LIQUORS

The "Bond" of Friendship

Famed for 129 Years

JOSO LED IV

OVER HOLF

DISTILLED BY
Shelt Co. She

STRAUGHT RYE

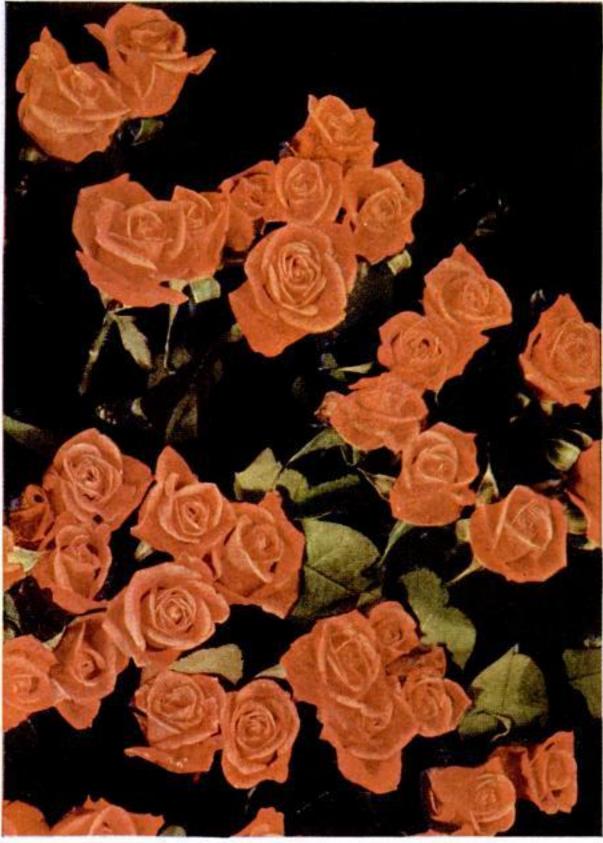
WHISKEY

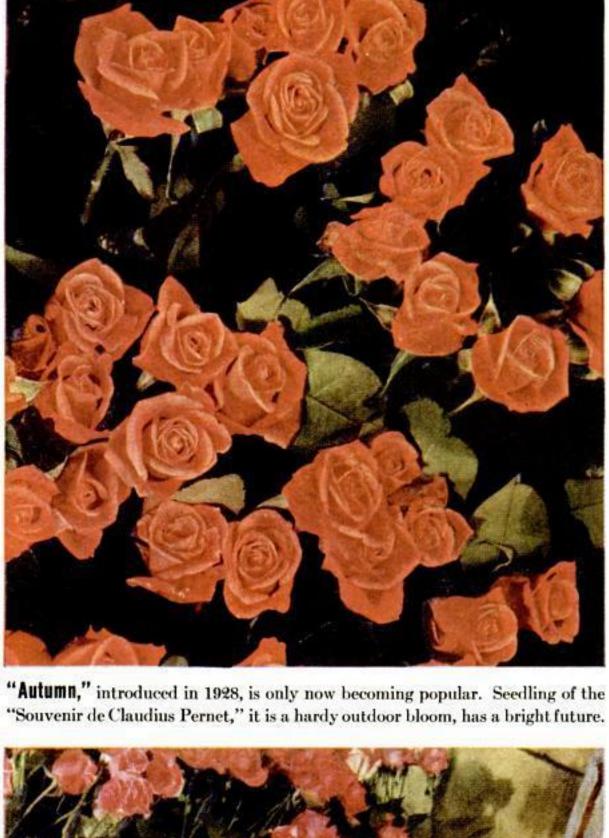
BROAD FORD. PA. U.S.A.

BROAD FORD. PA.

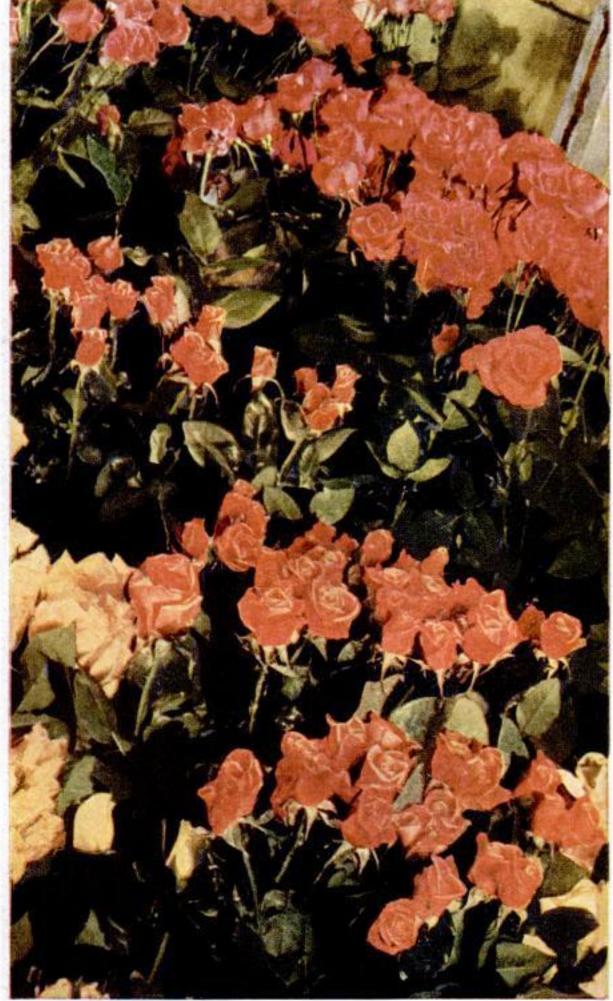
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HORTICULTURE

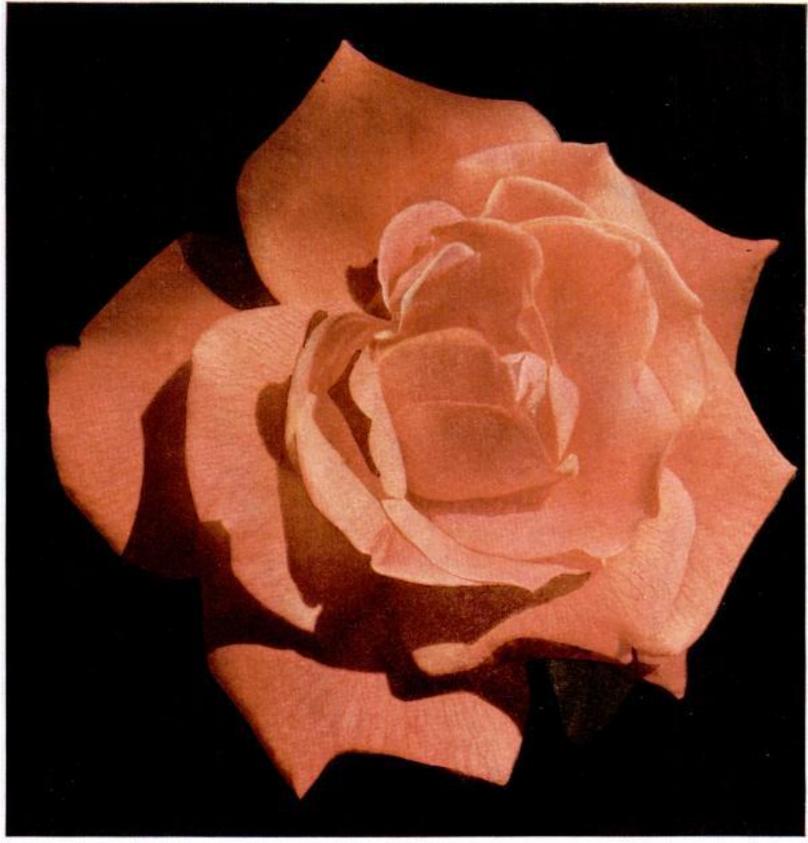




"Souvenir de Claudius Pernet," it is a hardy outdoor bloom, has a bright future.



A bank of roses includes "Mrs. Roosevelt" (left), "Autumn" (middle), "Better Times" (rear). The greatest of all white roses is famed "Lum's Double White."



"R.M.S. Queen Mary," sensation of spring shows, was originated by a Dutchman and named "Mrs.



"Mrs. Franklin D. Roosevelt," only five years old, is today the most popular yellow rose in the U.S.



Verschuren" after his wife. U.S. growers renamed it

for ship, which some rosarians consider unethical.

"Briarcliff" comes of a famous rose line. A great favorite ten years ago, it still has many admirers.



"Better Times," descendant of "Briarcliff" (above), is the most widely grown rose in America and the

best-selling cut flower. It has held this high place for four years, which is a long time in horticulture.

THE DESCENDANTS OF "OPHELIA" DELIGHT MILLIONS OF AMERICAN ROSE GROWERS

Millions of Americans still think that the "American Beauty" is the ultimate in roses. Half the men who call expensive florist shops today insist on sending "American Beauties" to their girls. They do not know that the "American Beauty" is virtually no longer grown. Popular in the heyday of the Pittsburgh millionaire, it has faded into oblivion. In the past quarter of a century, development of new varieties has brought the art of rose culture to its present high peak.

The rose that has done more than any other single rose to improve the species is the one shown at right. This is "Ophelia," the great mother among roses, who has more distinguished descendants than any other modern flower. Every year some of her numerous line win medals at the best rose shows. Three of "Ophelia's" family are shown in color on the opposite page: "Briarcliff," "Mrs. Franklin D. Roosevelt," "Better Times." Below is part of "Ophelia's" genealogical table. "Ophelia" herself is one of the few great roses that have no pedigree. She was a chance variation grown in 1912 from a pod gathered haphazardly in an English nursery.

Every year, a hundred new species of roses are introduced into horticultural society by growers who hope they may have another "Ophelia." Most of them are quickly forgotten. A few stay and become popular, like those on the opposite page.

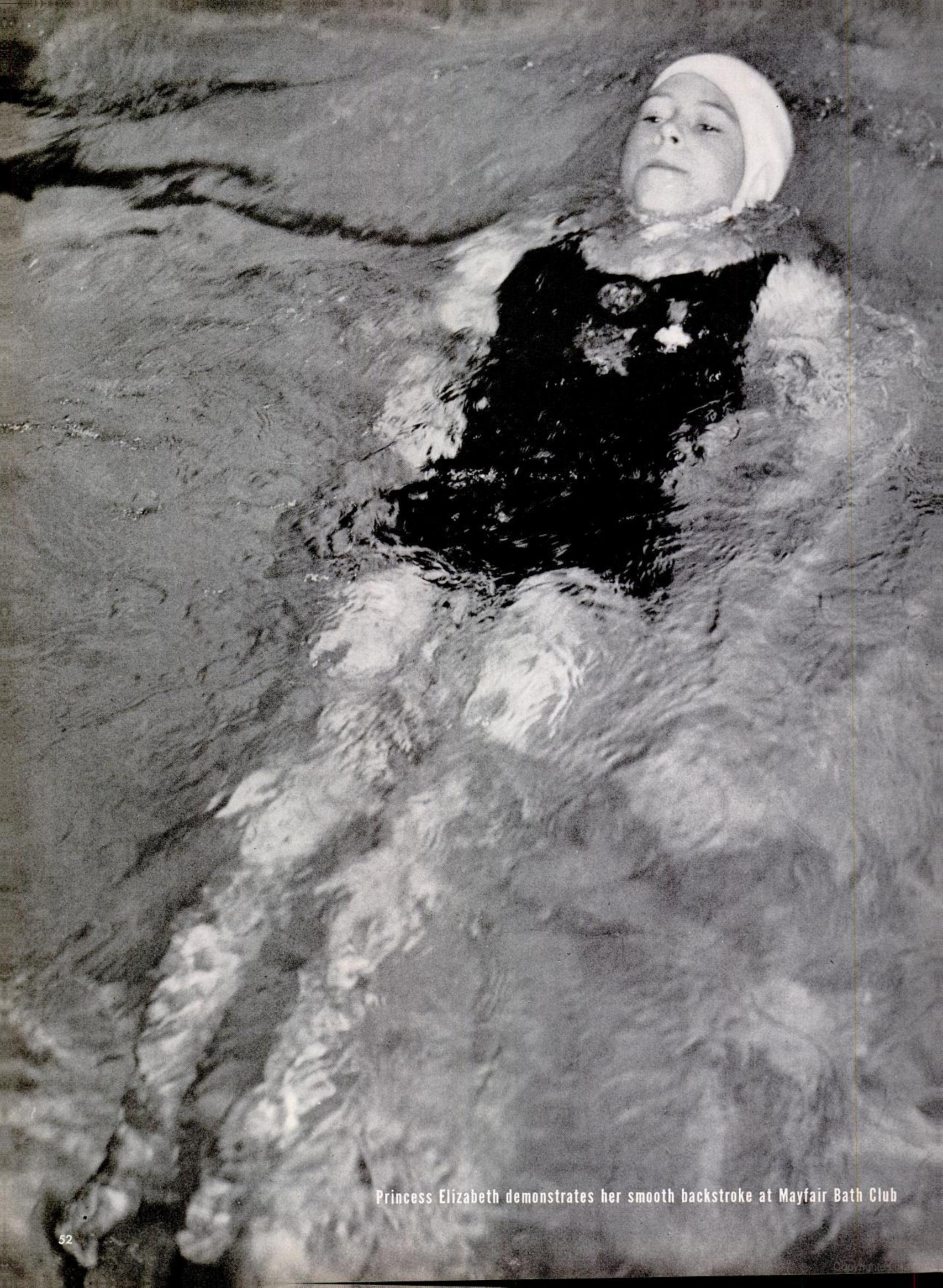
They are all hybrid tea roses, bred from the quick-growing Tea rose and the hardy Hybrid Perpetual. Almost all commercially grown roses are hybrid teas but amateur American rose growers, who are counted in the millions, still grow a myriad ramblers. The rose is and has been through history the most universally admired of all flowers. Sappho called it "Queen of the Flowers," the Romans loved it, and England may have been given the name "Albion" because a rose resembling the white ob rosas albas grew so beautifully there.



"Ophelia," the mother of a great rose family, is a yellow-pink, medium-sized bloom with heavy foliage, few thorns and a slight fragrance. She is not as lovely as her famous descendants, but commercial nurserymen grow her assiduously, hoping she will sport new best-sellers.

FROM "OPHELIA" ARE DESCENDED THESE TOP-NOTCH ROSES. THEY RANGE IN COLOR FROM WHITE "TANTAU" TO BRIGHT RED "BRIARCLIFF" TO YELLOW "DU PONT"





ROYAL PRINCESSES WIN PRIZES AT LONDON CLUB

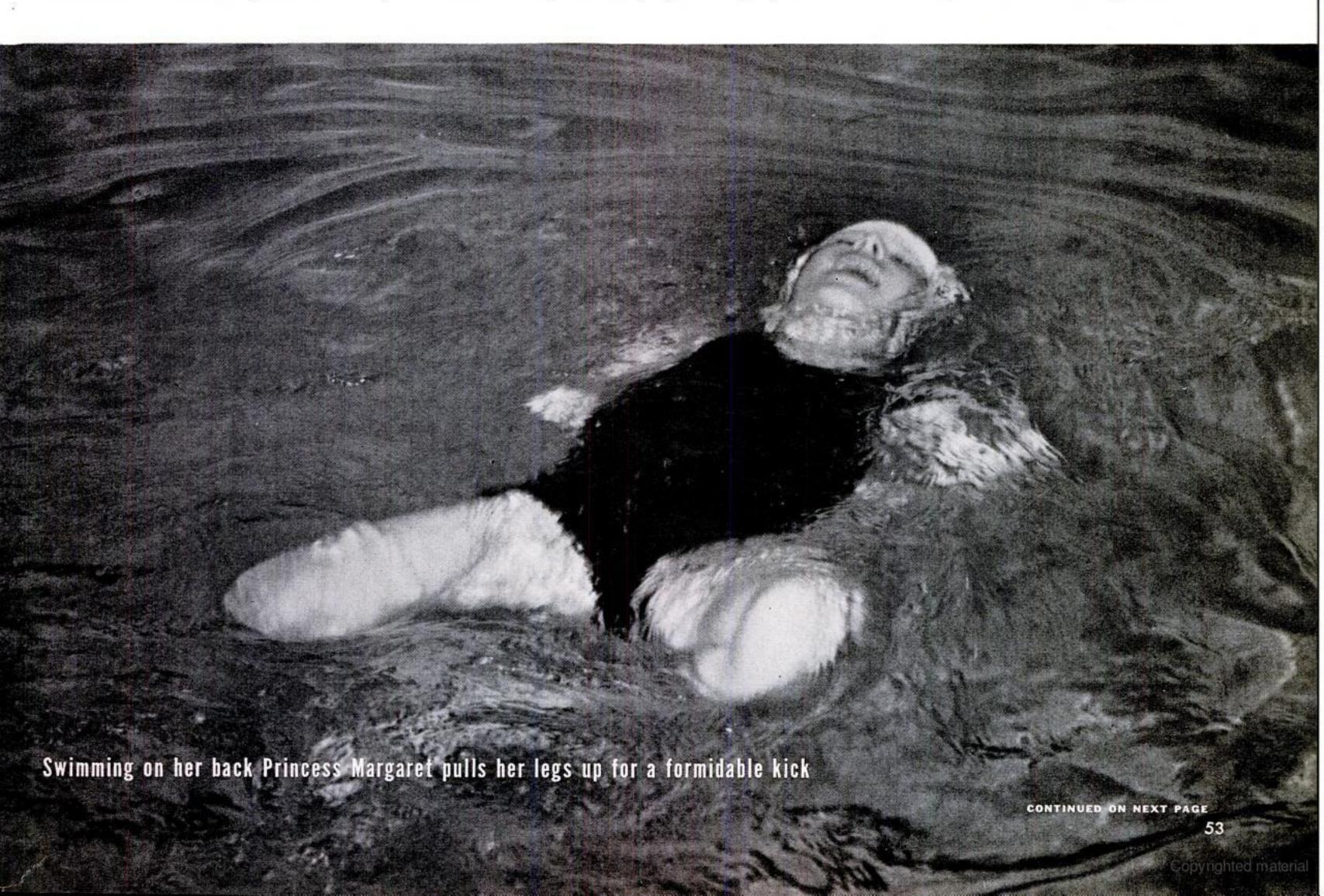
Land's Royal Princesses, Elizabeth, 13, heir apparent to the throne, and Margaret, 8, second in line of succession, are a lively pair whose long list of London activities include weekly swimming lessons with other well-bred little girls at Mayfair Bath Club. One of the first functions attended by Queen Elizabeth after she and George VI returned from their American tour was the Bath Club's annual summer swimming competition. When the moment arrived to hand out prizes, the Queen enjoyed the opportunity of giving one to each of her daughters. Margaret, who had won a challenge cup for girls under 9, and Elizabeth, who had won a shield for girls over 9 and under 14, curtsied politely and said, "Thank you, Mummie."

The Princesses get lessons from governesses and tutors instead of going to school but otherwise their lives are like those of other rich little female Londoners. Both collect stamps, like jigsaw puzzles and produce their own Christmas cards. While their parents were in America they were allowed to build a fire out of doors and had a picnic in the grounds at Windsor. Elizabeth can cook, loves the theater and is now occasionally allowed to stay up for dinner when there are important guests. Last year she fell off her bicycle at Buckingham Palace and bumped her knee so badly that she was unable to attend a Royal garden party. Small Margaret-who, according to her maternal grandmother, the late Countess of Strathmore, hummed The Merry Widow waltz when still in her cradle-is considered artistic and musical. Her favorite expression is "Whoops!"



Bath Club class, in which Princess Elizabeth (front row, left) competes, contains nine other little girls near her own age. Next to Elizabeth (left to right, in front row) are: Katherine Coke, June Barrie (last year's champion), Mau-

reen Dillon and Holman Richards. Events in which both Princesses got prizes this year were medley contests which call for swimming the pool one length each in breast stroke and backstroke, one dive and a lifesaving demonstration.





Don't WAIT another day if you want to win a free round-trip to either Fair—or the equivalent in cash—or one of 88 other cash prizes! Hurry to your baker, donut shop, or food store for your free entry blank in the World's Fair Donut Recipe Contest.



A FEW WORDS can win you the year's most thrilling vacation trip or a big cash prize! Just give us a different, delicious recipe for serving different, delicious Tested Quality Donuts. That's all there is to it! Nothing to buy! No labels to send in! No box tops to bother with! This is the easiest contest you ever heard of!

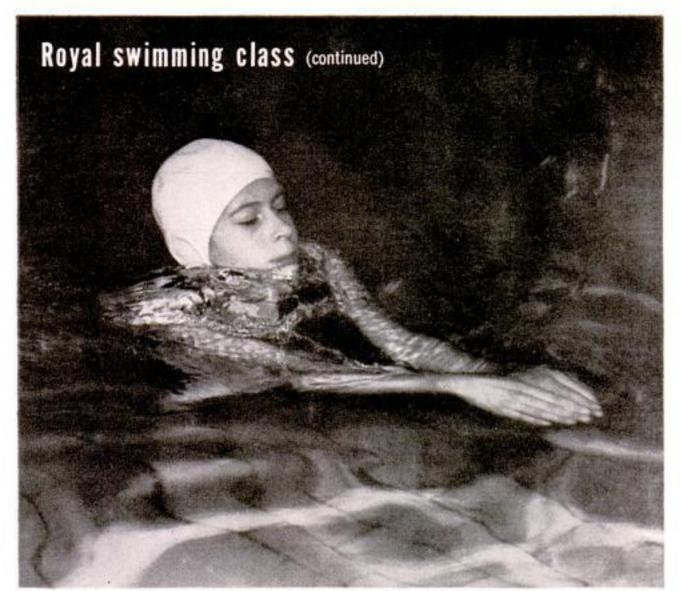
PRIZE-WINNING TIPS

And what an inspiration Tested Quality Donuts are! Made from certified milk, selected eggs, and pure vegetable shortening, they're a real tastetreat at breakfast... a grand betweenmeal snack. And you can combine them with fresh fruits and berries to make dozens of prize-winning desserts and party dishes.

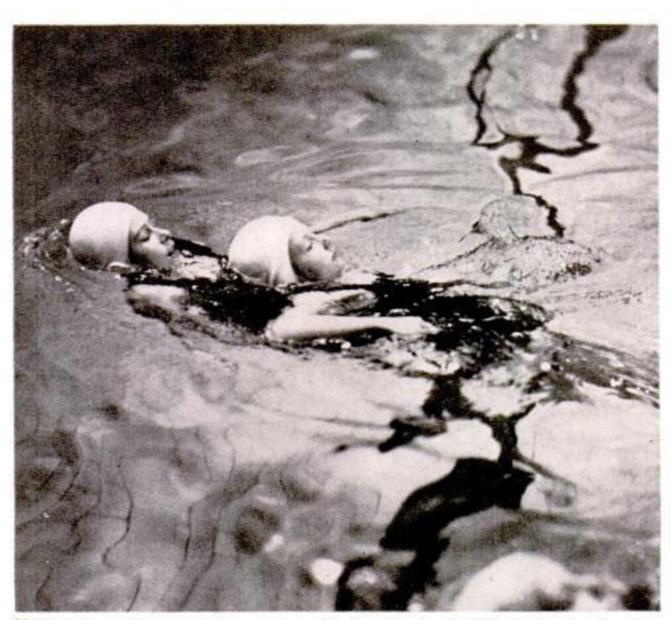
TRY SOME TONIGHT

You will find these special donuts under various brand names, including Mayflower and Downyflake. Just be sure the Tested Quality Seal is on the package. And you must hurry to enter the big World's Fair Donut Contest! Get your free entry blank today from your baker, donut shop, or food store!

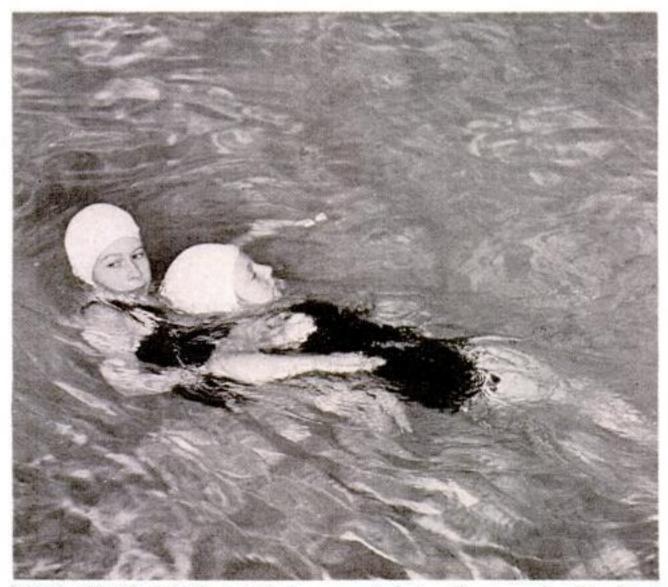




Starting lifesaving demonstration, Princess Elizabeth wears a grim expression. This is first time a future English Queen has ever been pictured in bathing suit for press.



Classmate who feigns helplessness is grabbed under jaw by Elizabeth, who tows her efficiently across the pool. Elizabeth wore a red swim suit, Margaret wore green.



Nearing side of pool, Elizabeth looks over to judge's gallery to see how her efforts are received. The Queen sat above pool with the other parents and applauded.



average breasts are especially susceptible to premature "breaking down," Maiden Form created *"Allo" to safeguard fuller bosoms and to give them well-defined, well-uplifted contours. With or without diaphragm bands—\$1.00 to \$3.50.



Maiden Form's "'Intimo" bandeaux — to emphasize the "dividing line"—now made with lovely low backs for evening or daytime wear — \$1.00 and \$1.50. Send for free Style Booklet C: Maiden Form Brassiere Co., Inc., New York.

U. S. Pat. Off. AT ALL LEADING STORES





 Household jobs rob your hands of their soft glamour. Use Hinds Honey and Almond Cream to coax back softness. Even one application makes rough coarse hands feel smoother! \$1, 50¢, 25¢, and 10¢ sizes.

A GIFT FOR YOU—A new Hinds preparation is your gift with medium-size Hinds lotion.

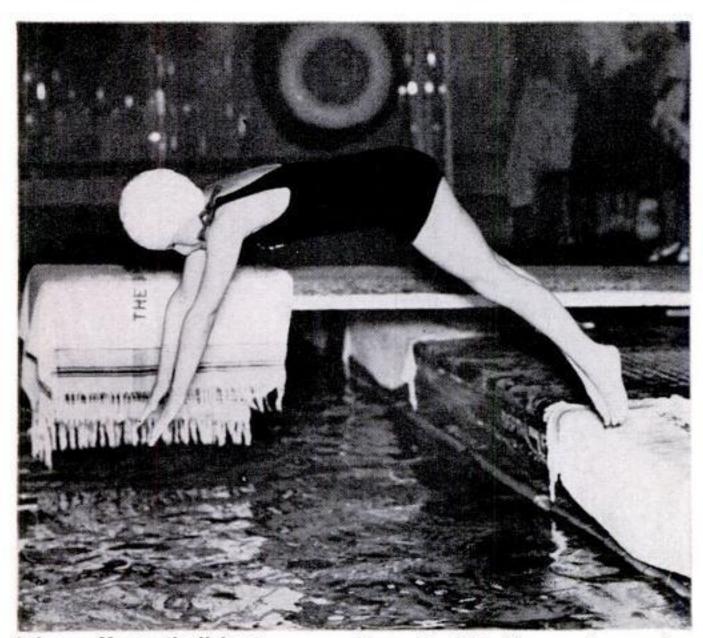
Ask for it at toilet goods counters today!

HINDS FOR HANDS

Copyright, 1939, Lehn & Fink Products Corp., Bloomfield, N. J.



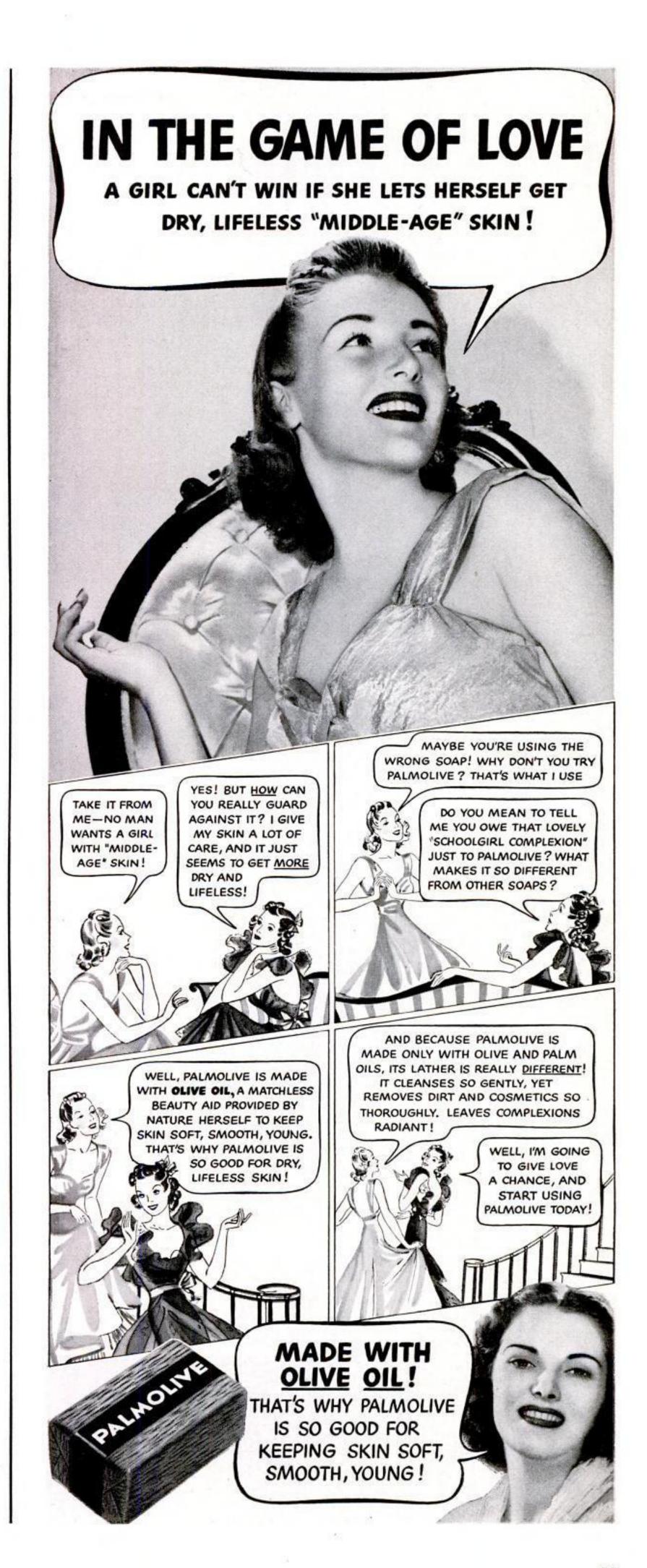
Princess Margaret (front, right) has two small boys in her class, Mark Hawkings and John Eccles. Margaret swam before Elizabeth, went to gallery, applauded her sister.



Princess Margaret's diving leaves something to be desired in grace but gets her safely into the water. Margaret admires and constantly imitates her older sister.



Queen Elizabeth awards all prizes, gives cup to Princess Margaret while Princess Elizabeth watches. Elizabeth acquired 35 points out of a possible 40, Margaret 35½.



THE

TELEPHONE COMPANY



A. T. & T. is biggest private enterprise

There is enough telephone wire in the U. S. to reach from the earth almost to the sun, 93,000,000 miles away. There are enough telephone poles to build a solid 30-ft. high fence from New York to San Francisco. There are about as many phones in the U. S. as in all the rest of the world put together. There are, in short, enough statistics in the telephone business to daze a sensible man, enrapture a mathematician or choke a horse.

There is also the making of a big fight between the largest public enterprise and the largest private enterprise in the land, between the Federal Government and the American Telephone and Telegraph Co. Few weeks ago, the Federal Communications Commission sent to Congress a report on A. T. & T. on which four years and \$1,500,000 had been spent. The report found little fault with A. T. & T. as a well-operated, efficient communications system. It did, however, complain that rates were "unusually high"; that the company tried to avoid proper public regulation; that its operating subsidiaries paid unreasonably high prices for equipment bought from its manufacturing subsidiary, Western Electric; that it kept valuable patents idle instead of using them to better service. Most important of all, the report recommended that F.C.C. be given stricter control over financing and rate-making in A. T. & T.

The telephone company's reply is that F.C.C. had never given A. T. & T. a fair chance to present its evidence, that the report was in serious error on fact. But the main dispute between government and A. T. & T. is not over fact but over philosophy. A. T. & T. believes that, so long as it is well run in the public interest, it should be let alone. New Deal liberals feel that anything as big and monopolistic as A. T. & T. should be strictly regulated by the Government.

A. T. & T. is the biggest private corporation in the world. Its assets of \$5,000,000,000 and payroll of 292,000 place it ahead of such corporate giants as Metropolitan Life Insurance, United States Steel, General Motors. None of these companies enjoys nearly the monopoly that A. T. & T. does. It controls 21 major U.S. telephone companies which own 16,000,000 of the country's 20,000,000 telephones. The equipment not operated by A. T. & T.'s Bell System is mostly bought from A. T. & T.'s subsidiary, Western Electric. But as monopolies go, A. T. & T. is fair, benevolent and public-minded. It is owned by 650,000 stockholders, none of whom owns as much as 1% of the total number of shares. Last year, with more telephones in operation than ever before in its history, A. T. & T. made a net profit of \$152,000,000.

The average American has little direct contact with A. T. & T. except at the two World's Fairs where the telephone exhibits, featuring free longdistance calls and mechanical voices, are hugely successful both in giving entertainment and getting good will. The average American deals with a local Bell company which installs his phone, argues with him about his bills, soothes him when his phone gets out of order and tries to give him the feeling that he is able to bully a giant corporation. Most of the photographs on these pages were taken by Margaret Bourke-White, LIFE staff photographer, at the largest of A. T. & T.'s subsidiaries, New York Telephone Co. This is the company which employs Walter Burdick (opposite page), who repairs telephone lines between Valhalla and Brewster, and who leads the sometimes dangerous and heroic life of a telephone lineman. It is also the company which operates the complicated switchboard shown at the right.

57

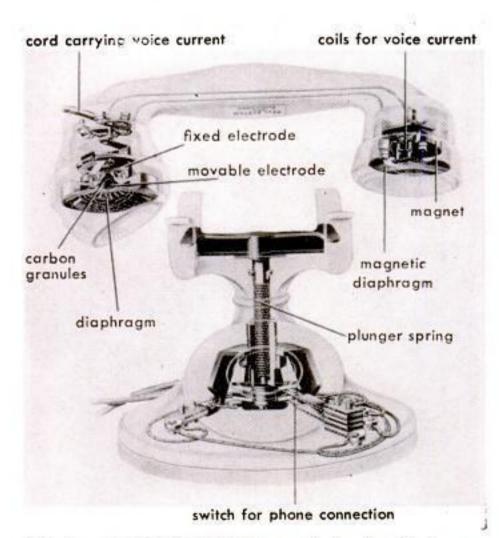
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This is how the dial phone works

Leven in this age, when mechanical marvels come a dime a dozen, the telephone remains a marvelous mechanical instrument. The photographs on these pages show what happens when you make a dial telephone call. The way to appreciate the story they tell is to take them to your phone, look at them while you dial a number. Remember that from the time you lift the receiver until the time you hear the dial tone, all the happenings shown in the first five pictures have taken place. Remember, as you dial, that a forest of rods and an army of robot fingers are working with unseen precision. When you finally hear the ring which announces that you are connected to your number, 882 separate and distinct operations have been started and completed, all in 11 seconds.

The fanciful drawings with the pictures explain symbolically what happens in each step. The little messenger rises when the signal reaches the line finder. He starts dial tone, makes a record of your number, darts toward the exchange you call, rushes through relays and wires, finally rings telephone.

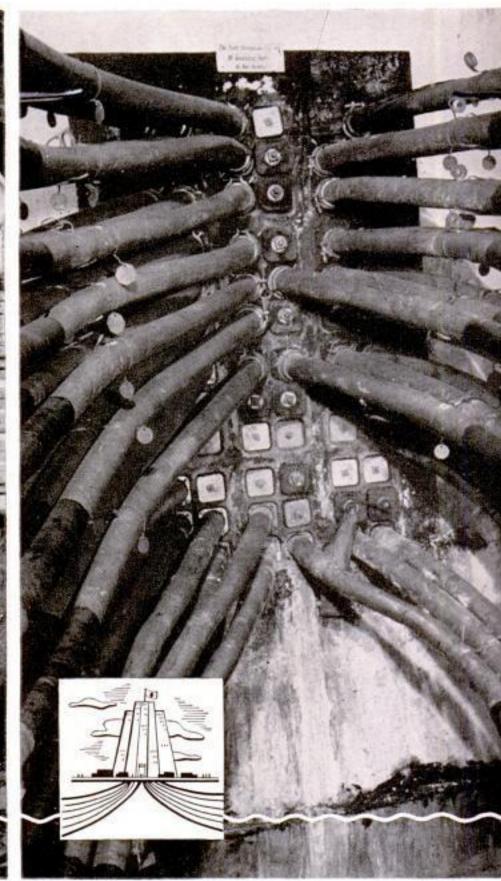
Almost half of the 20,000,000 U.S. telephones are now dial-operated. Eventually almost all of them will be dial instruments. But small exchanges will probably retain their present apparatus, which works more economically where phones are fewer. The U.S. city which has most telephones is New York, where there are 1,650,996 phones, more than in all France. The cities with most telephones per capita are Washington and San Francisco, which have one phone for every three persons. On an average day, 70,000,000 telephone conversations are made in the U.S. Some Bell engineers once decided to see what words people used most when they used the complicated and intricate machinery of the telephone. Ignoring such sounds as "er," and "uhhuh" the one word which led all the rest was "I."



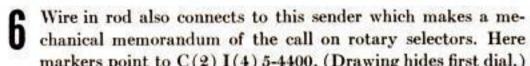
Telephone transmits sound: In mouthpiece is a diaphragm, attached to a movable electrode. Voice causes diaphragm to vibrate. Electrode vibrates with it, presses against carbon granules, changes amount of current going through them. When it presses them hard, on strong vibrations, it squeezes granules together. The more closely packed they are, the more current the granules transmit. Varying currents go through the electrodes out into telephone line. Coming into earpiece, current passes through an electromagnet. As current is stronger or weaker, the magnet exercises more or less attraction for the diaphragm which vibrates, sets up sound waves duplicating those spoken into mouthpiece.

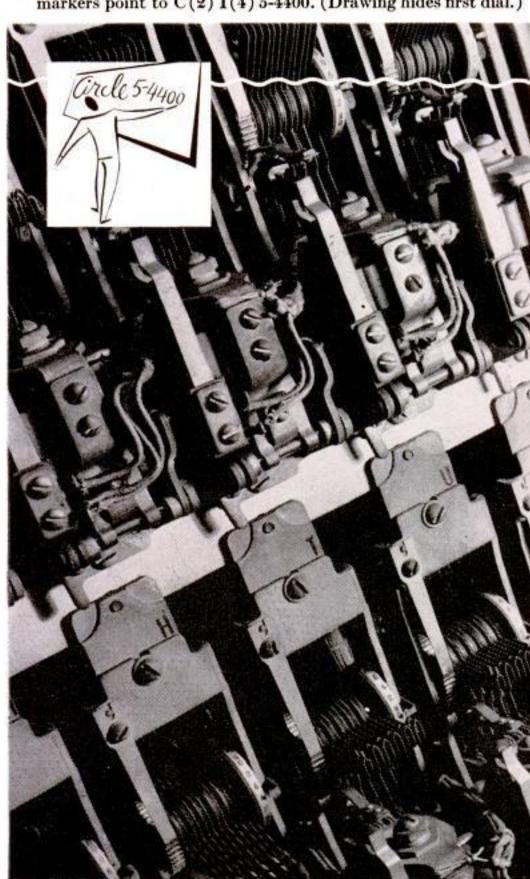


This is the dial of telephone PLaza 3-9970. The wheel is a governor which regulates speed of dial. Above governor are dial contacts. The receiver is lifted to call CIrcle 5-4400.

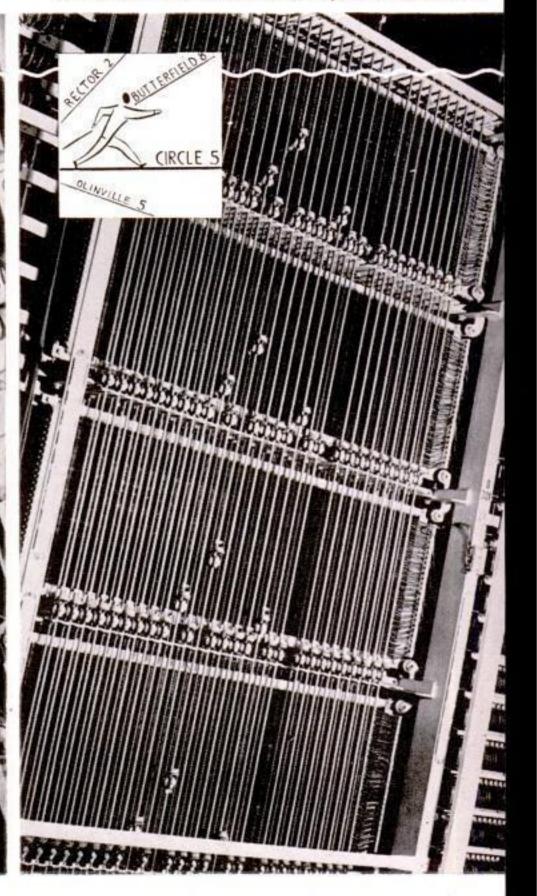


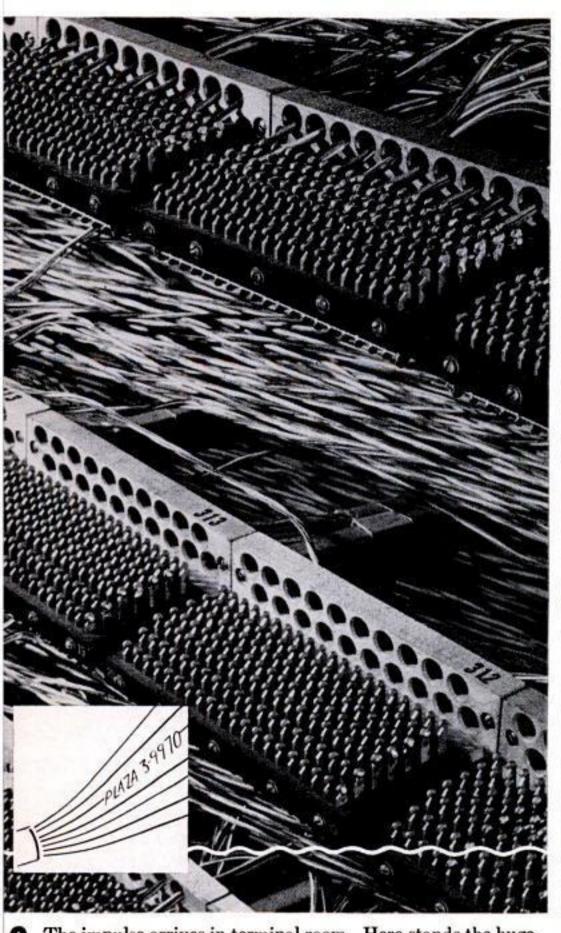
As soon as the receiver is lifted, an electrical impulse passes from the telephone, under the street, through cables to the central office for the PLaza 3 exchange.



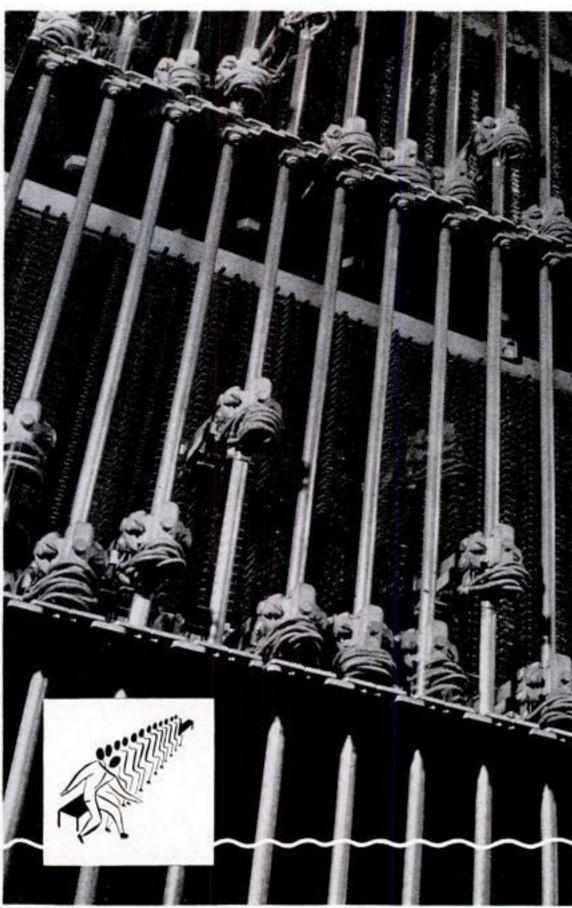


From now on, the sender, brain of the dial, directs getting the number. Fingers on selectors in PLaza 3 central office find the CI 5 trunk, send the call on.

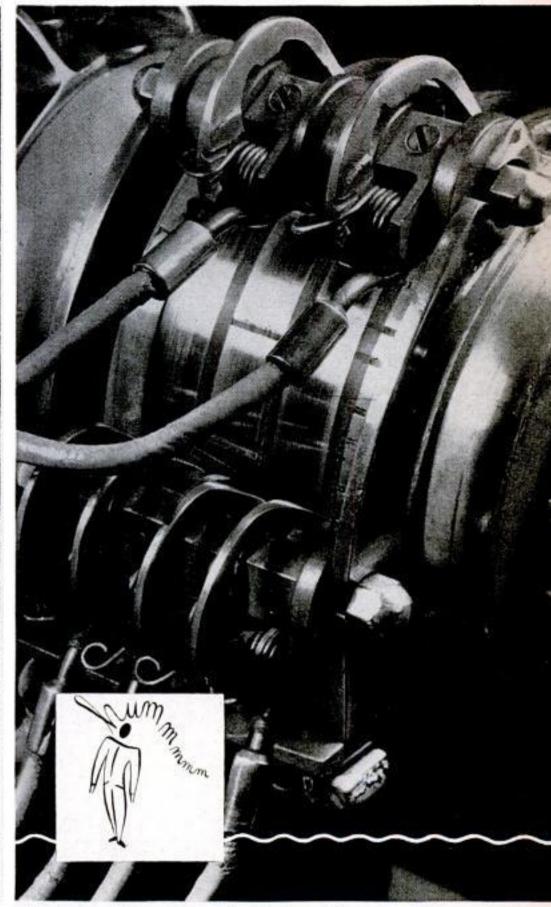




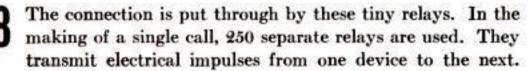
The impulse arrives in terminal room. Here stands the huge distributing frame studded with terminal stripes. Each telephone is connected directly to its individual terminal points.



From terminal points line is connected to metal tips on line finder. When the impulse reaches the tip, a metal selector finger rises along its rod, clamps itself to the tip. Inside the rod are wires.



A circuit is now completed: from phone through terminal points, through tip, through finger, through wire in rod to this machine whose whirling cylinders give "dial tone."

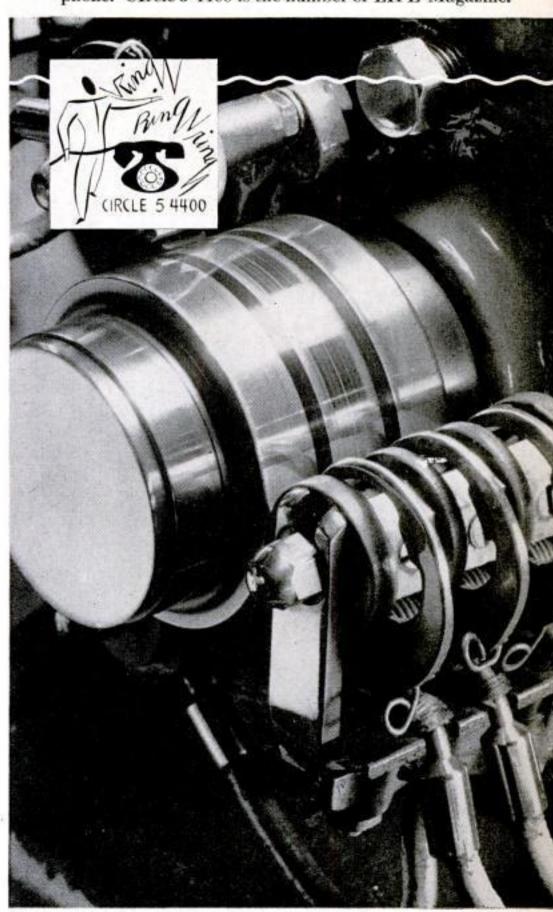




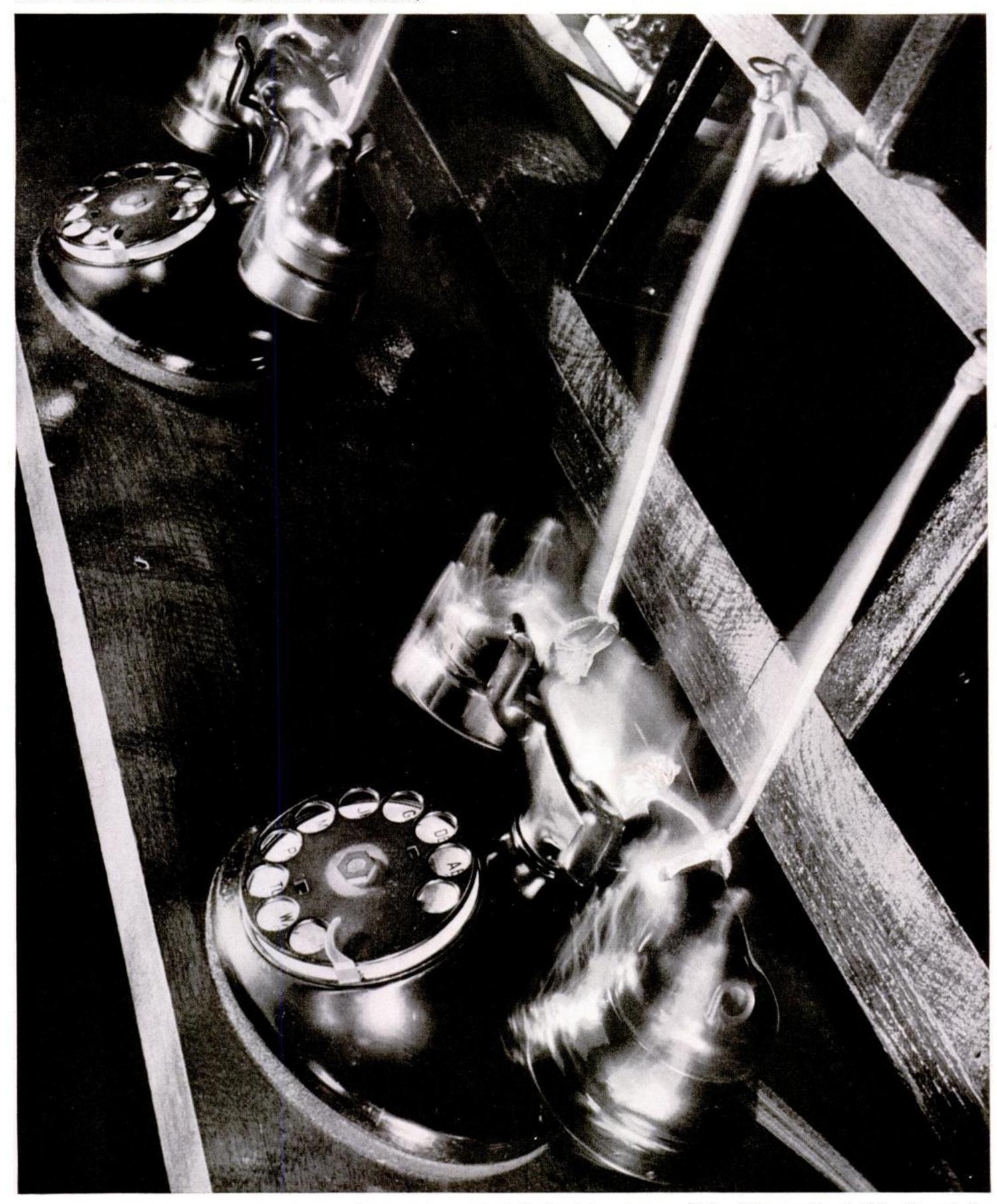
Now the message is in the CIrcle 5 exchange. Fingers on selectors search out the 4-4-0-0. Then, through wires in the rods, the call reaches the 4400 distributing frame, goes underground to phone.



As it reaches the 4400 terminal, call is connected with ringing machine which governs ringing of bell in the telephone. CIrcle 5-4400 is the number of LIFE Magazine.



THE TELEPHONE COMPANY (continued)



Phones get jiggled in endurance test

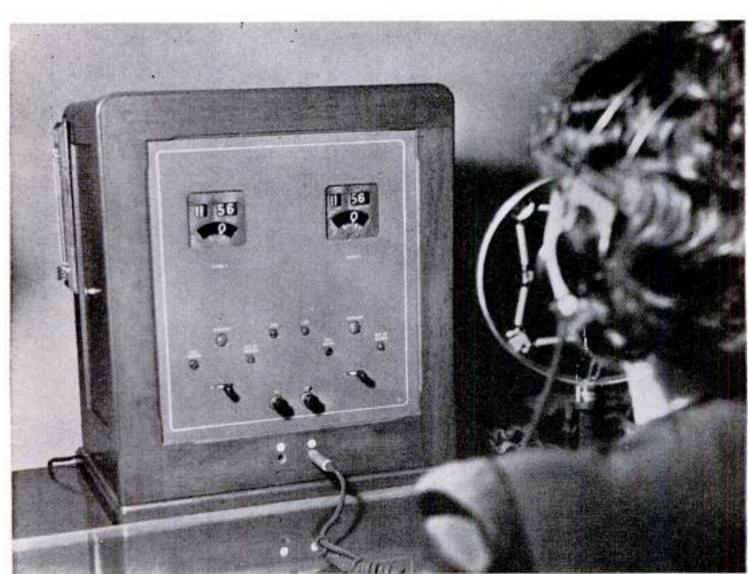
Once every three seconds, the handles of these phones, which are sitting on a bench in A. T. & T.'s Bell Laboratories, are lifted by strings to a height of $1\frac{1}{2}$ in., then dropped back into the cradle. Each $1\frac{1}{2}$ in. drop is the equivalent of average drop the receiver undergoes at the end of a telephone conversation. After 14 hours of lifting and dropping, these instruments have lived a telephone

lifetime of eight years. Then the Bell engineers take them apart to see how they have withstood such treatment. Weakest point is the transmitter where carbon granules become closely packed after long jiggling, transmit sound poorly. But even after eight years, the telephone still works although it sounds pretty noisy. The average phone, however, serves only four years before being overhauled.

People run its machines

The functions of the telephone company are not entirely performed by robot messengers sliding up and down selector rods, all day and night at the beck and call of an electrical impulse. The work is also done by engineers in laboratories who test telephones by maltreating them (see opposite page) and who do such non-telephonic work as research on the "reflection of electrons from solid surfaces" and "the behavior of organic molecules as related to their structure." It is done by men who weave wires into cables, by men who lay them underground, by men who build switchboards out of mazes of wire, by men who spend whole days thinking up new names for telephone exchanges, by men who spend whole days answering complaints.

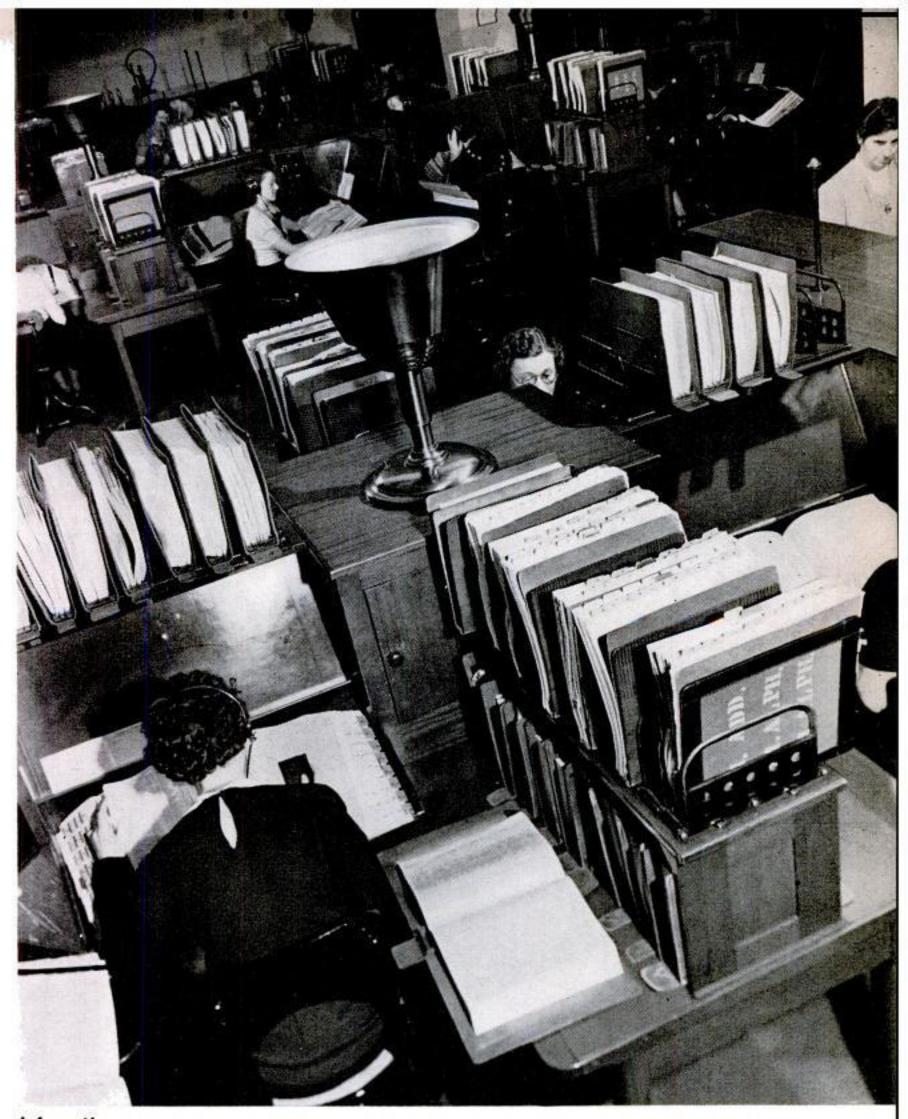
But most of the telephone company's work is done by the girls whose deft fingers and mannered voices work the switchboards. The telephone operators are the largest single group of A. T. & T. employes—120,000 of the 292,000 total. Below at right are girls training to be operators in the New York Telephone Co. To qualify for a job, a girl must be at least 18 years old, not more than 10% lighter or heavier than normal weight for her height and age. She must not be a college graduate, because college graduates are not permanent employes, and she must not be left-handed because switchboards are built for right-handed people. She may or may not be married. About 40% of the operators are. She is allotted two maternity leaves of absence. If she has a third child, she gives up her position.



The correct time is on tap four times every minute. The operator above, watching these two separately run electric clock-dials, is announcing that the exact time is now 11:56.



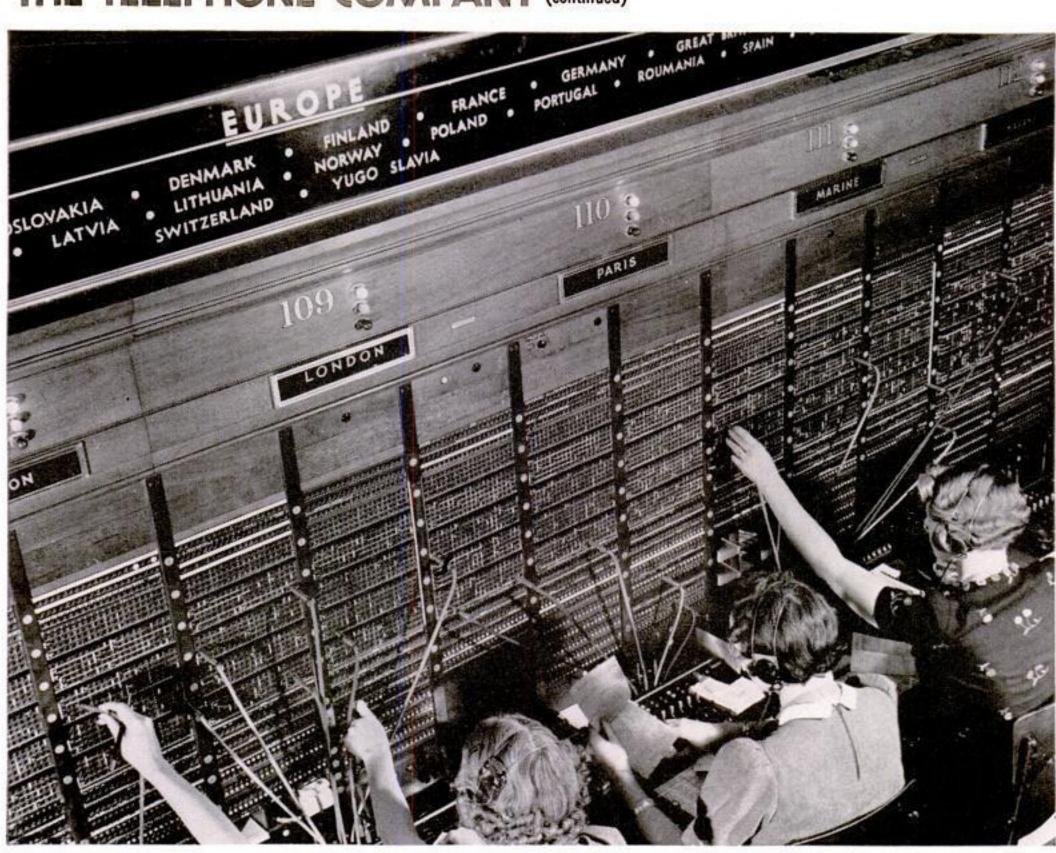
Telephone bills are made from records kept automatically on these registers. Each time a call is completed, the meter registers it. Once a month, meters are photographed for billing.



Information (above) answers 2,000,000 queries in the U. S. a day. Consulting local and long-distance books, special directories, a daily directory of new numbers, the operator must answer the average query within 56 seconds. Below, novice operators talk into a "voice mirror" which, by means of a recording device, plays the voice right back so that the operator can hear for herself if she is saying "ni-en" distinctly enough so that it won't be mistaken for "fi-iv."



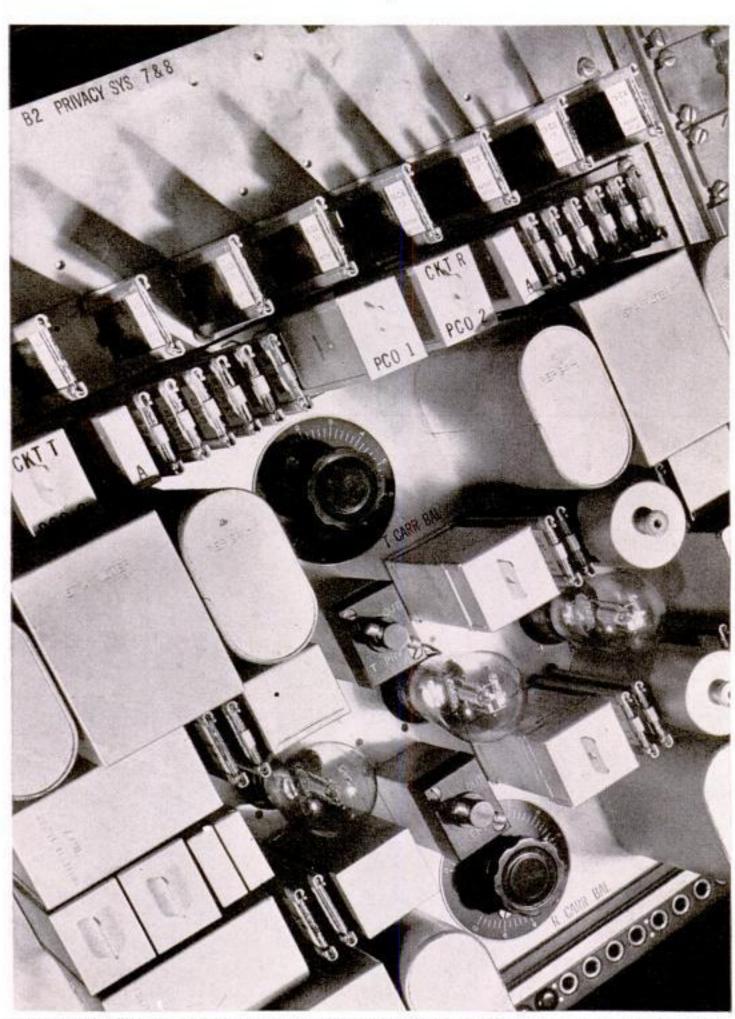
THE TELEPHONE COMPANY (continued)



OVERSEAS SWITCHBOARD IN NEW YORK: ALL CALLS TO EUROPE AND AFRICA ARE ROUTED THROUGH LONDON AND PARIS



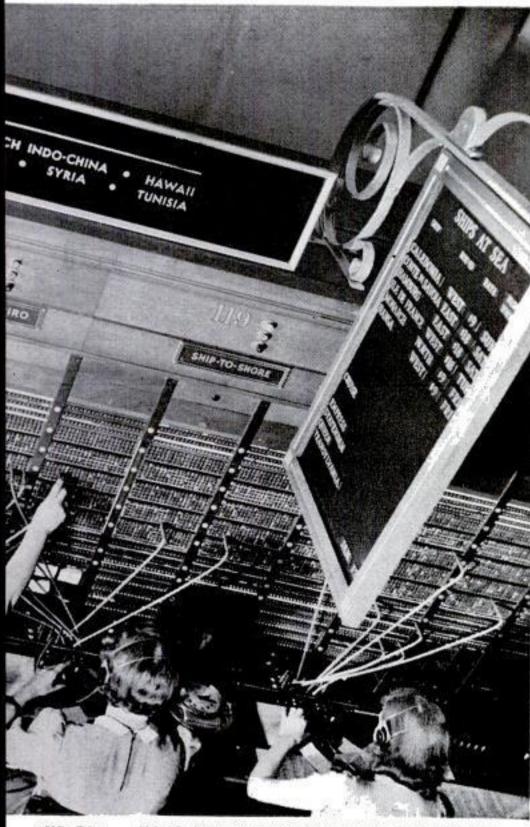
MOST SOUTH AMERICAN CALLS GO VIA BUENOS AIRE



Voice scrambler, known as a "privacy system," keeps short-wave radio-set owners from eavesdropping on overseas calls. Apparatus turns a caller's voice upside down, makes high tones low, low tones high. Resulting gibberish is transmitted, then unscrambled at receiving end.



Foreign telephone directories for 110 big cities are kept in the overseas switchboard room. Most numbers are looked up on this side of the ocean to save expensive overseas time. Visible above are directories for Warsaw, Geneva, Santiago, Buenos Aires and Vienna.



AND RIO. NOTE "SHIPS AT SEA" BULLETIN AT RIGHT

"Overseas" joins U.S.A. to world

of the things that A. T. & T. brags most about is the fact that anyone using a Bell System telephone in the U.S. can talk to anyone on any telephone anywhere in the world except in Soviet Russia, Turkey and New Zealand. This accounts for 94% of the world's telephones. Overseas service, started in 1927, handles an average of 280 calls a day. They go out over short-wave radio transmitters from Lawrenceville, N.J., which sends to Europe, Africa and South America; from Opa Locka, Fla., which sends to the West Indies; and from Dixon, Calif., which takes care of the rest of the globe. Busiest station is Lawrenceville, whose tall antennas are shown at right.

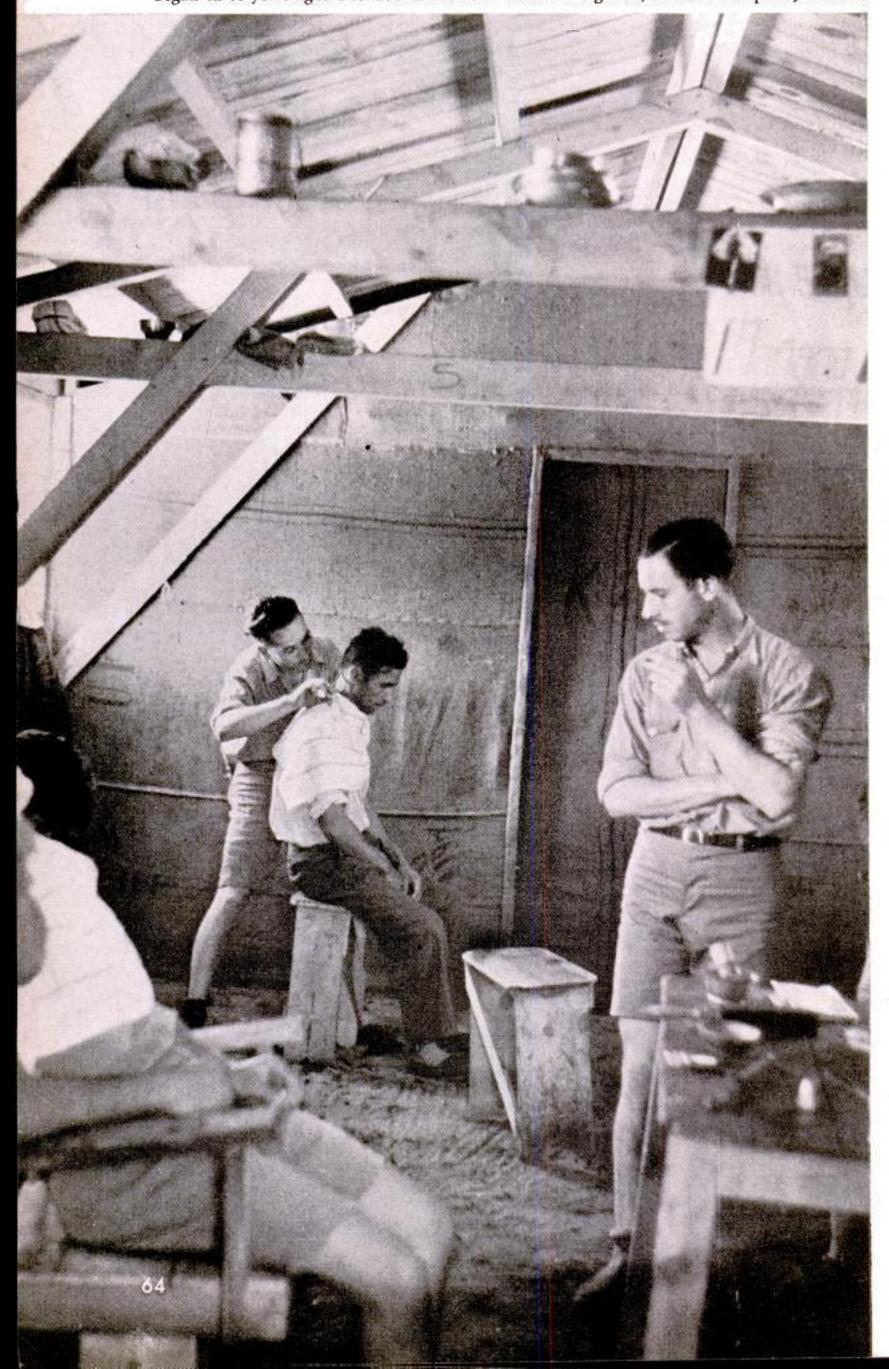
Heaviest overseas traffic is to Great Britain, France, Porto Rico and Hawaii. A three-minute daytime call from New York to London or Buenos Aires, or from San Francisco to Sydney, Australia, costs \$21. Surprisingly, almost half the overseas calls are social, Christmas being the busiest day in the year. Most expensive call on record was made in 1928 by the famed speculator, W. C. Durant, who called his broker from Paris and spent an hour and a half on the phone. It cost him \$1,527.50. One of the longest calls was made by a man in New York who called Shanghai to order \$20,000 worth of goose feathers.

Overseas service also connects the U. S. with 23 ocean liners and hundreds of private yachts. In the New York switchboard room is a display board which tells operators where ships at sea are so that they will know what to charge for a call—from \$4.50 to \$18 for a three-minute call, depending on distance from the U.S. More than \$2,250,000 was spent on overseas calls last year. A. T. & T. permits no collect calls because exchange rates fluctuate too quickly.



The flag of the French Republic flies from the watchtower of the Spanish refugees' camp at Barcarès. These pictures of the Barcarès camp were taken by Miss Ione Robinson.

This barbershop at Barcarès is run by Spanish militiamen who were barbers before the war began three years ago. The men kill time with football games, concerts and poetry recitals.



SPANISH "ARMY" IN FRANCE

The French wonder what to do with the 350,000 Loyalist Refugees who huddle in confinement

by HAMILTON FISH ARMSTRONG

Hamilton Fish Armstrong is the editor of Foreign Affairs, scholarly quarterly review of the world's politics. Last May he went to France as a journalist, but his membership in President Roosevelt's Advisory Committee on Political Refugees helped get him into the closely-guarded concentration camps and scattered billets in which France plays unwilling host to some 350,000 exiled Spanish Loyalists. On these pages he has written an unbiased, honest report on those strange purgatories of despair and misery. No more competent observer of Europe's politics exists than Mr. Armstrong, whose books include We or They, Europe Between Wars and When There Is No Peace.

Generalissimo Franco, victor in what badly informed people still call the Spanish "Civil War," has now closed almost entirely the frontier between Spain and France. This leaves the French Government with over 350,000 Spanish refugees on its hands, residue of the most precipitate mass exodus in all history.

Half a million human beings, fleeing Franco's reprisals and pursued along the roads of Catalonia by the machine guns of low-flying Italian planes, piled up in inextricable confusion during the last week of January along the French frontier. After hesitation, Premier Daladier decided to forget that admission of the retreating Republican troops would be unpopular in French conservative circles, would dim hopes of good relations with Franco and would infuriate Rome and Berlin. On February 5 the frontier was opened to all, soldiers and civilians alike. During the next few days they poured in along three gorged roads, on a frontier less than 70 miles in length. They arrived almost exclusively in one department, the Pyrénées-Orientales, and outnumbered the indigenous population there by two to one.

At the frontier French guards disarmed the soldiers. In Perpignan the Prefect of the Pyrénées-Orientales found what shelter he could for some of the women and children. Others were loaded on boxcars and shunted off in every direction. The rest, men, women and children alike, were simply herded like cattle onto the sandy wastelands along the shore of the Mediterranean, where

CONTINUED ON PAGE 66



Author Armstrong (right) interviews a Spanish Loyalist officer (at left) who is showing him the kitchen at Barcarès. The food is sufficient but dull. The cooking is insanitary.



Barcarès Camp No. 2 houses an army corps of Spanish Loyalist militiamen. Notice men at the pump in foreground and

the built-out bases of the barracks to provide bunk room. The total number in France: 350,000, including 120,000 sol-

diers, 50,000 civilian men, 100,000 women, 80,000 children. Cost to France is 50¢ per head per day—so far \$13,500,000.



Spanish exile stands behind French barbed wire. He knows that if he returns to Spain, he will probably be jailed or ex-

ecuted by the Nationalist Government. He is exhausted by five months' idleness, poor food, bad living quarters, endless

talk and no prospects. His chief hope now is to get on one of the boats for Mexico or Colombia, Venezuela or Chile.

SPANISH "ARMY" IN FRANCE (continued)

they burrowed in the sand, tore limbs from trees to make shelters, fashioned tents and roofs from blankets, bits of board, fragments of brokendown trucks and peasant carts. French troops stretched barbed wire around them, brought them food.

So came into being Argelès, first and most terrible of the concentration camps. As soon as they could (though only after the refugees had gone through weeks of exposure in the rain, wind and cold), the French authorities sent in shipments of rough boards and sheet tin for roofs. Flimsy barracks went up. Late in May the writer saw the last of the primitive shelters being wiped out. The wind—that insistent wind that searches out every cranny and stings every face—was already smoothing the sand where they had been.

Barcarès: Home to 50,000 Refugees

A few miles up the coast, meanwhile, an enormous new camp was being made ready at Barcarès for the overflow from Argelès and the other make-shift camps. More than 50,000 émigrés are living there today in wooden barracks, hedged in with barbed wire, patrolled by French troops. About 150,000 more live in other camps. Another 150,000, mostly women and children, are billeted throughout France, in schools, disused military barracks, factories. Many (especially orphan children) are being cared for or helped by the Red Cross and by British, French, American and other relief organizations. Also active is the S.E.R.E. (the Service d'Evacuation des Républicains Espagnols), a central committee in Paris financed by the former Negrin Government. It has catalogued the refugees, put members of families into touch with each other, and supplied them with clothing. Part of its funds it allots to the exiled Basque "Government" of President Aguirre, which works among the Basque refugees, all Catholics, through a committee under the patronage of Cardinal Verdier of Paris.

Despite this varied private assistance, the bulk of the refugees, both in and out of the camps, are maintained at the expense of the French Government. Housing and feeding them have cost it half a billion francs to date; and the current cost is 6,000,000 francs a day. The Government has not felt able to draw on the gold, worth a billion and a half francs, deposited in Paris during the war by the Bank of Spain.

In the first weeks after the exodus a large number of the émigrés returned home. But the policy of reconciliation (if ever Franco intended it as such) did not last long. Only a thin trickle of two or three hundred a day are being received by Nationalist Spain now. Nor do the stories told by those who still escape over the mountains, or the letters received from Spain in the camps, encourage repatriation. "We await your return with joy," wrote one mother to her son. "Try to arrive in time for the First Communion of little Juan." The warning is plain to the recipient, though hidden from the censor; for little Juan is only two years old. Or another: "Come soon. The house is crowded, for the Garcias lost their home and are living with us. But when you arrive you will find room with Cousin José." Cousin José was killed in the reprisals for the Asturias rising in 1934.

Three months after Franco's victory Fascist Spain remains terra incognita to the outside world. "El Caudillo" has imposed the strictest press

A photo diary of Spanish Refugees on a 20-day boat trip to Mexico:



The first shipload of Spanish refugees bound for Mexico sailed from Sete, France, on the S. S. Sinaia in May. Hired for this odyssey by the Spanish Republican's Emigration

Service, the Sinaia is a Fabre Line ship built to accommodate 600 passengers. On this trip it carried 1,800 refugees. Above is the send-off. The trip took 20 days to Vera Cruz.



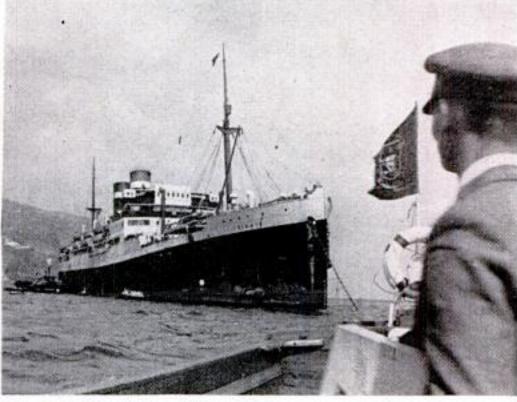
A refugee family plays chess on shipboard. Passengers named corridors and hatches for streets and squares in Madrid and Barcelona, hung their wash all over the rails and shrouds.

There were 300 children aboard and three more were born. Passengers included a gynecologist, dentist, lung specialist, skin specialist, two children's specialists and two pharmacists.

The "Sinaia" carries 1,800 penniless Loyalists and several famous names, to a haven in the new world



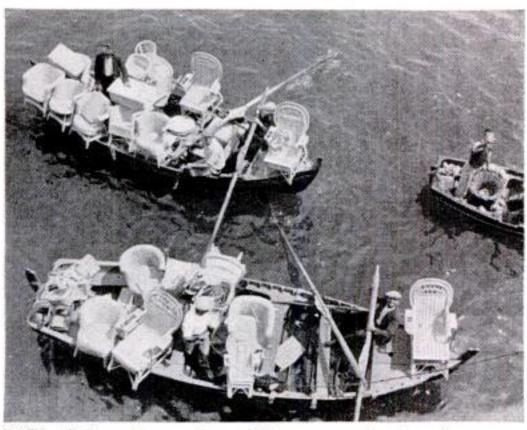
Duchess of Atholl, General Molesworth and Pablo de Azcarate raised money.



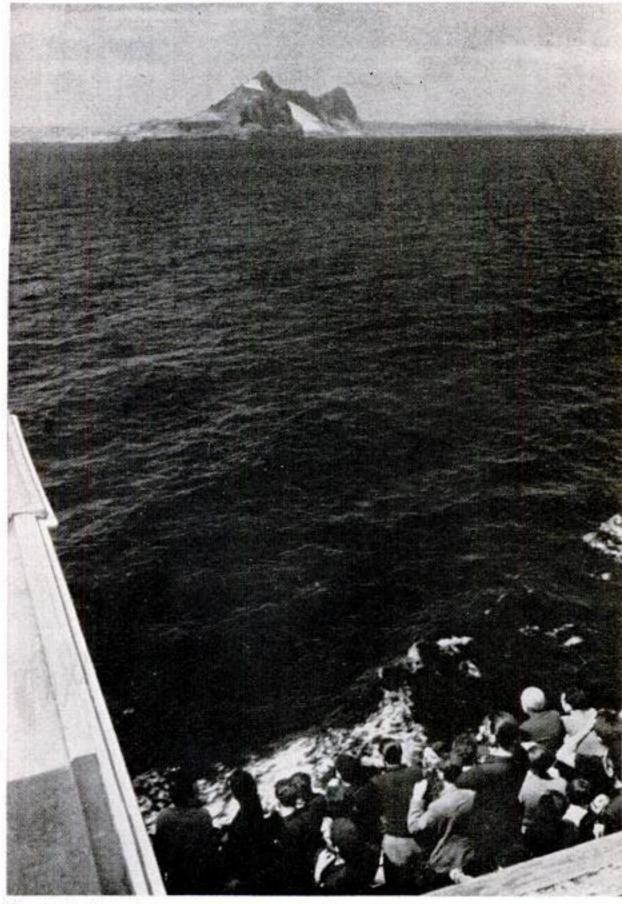
The S.S. "Sinaia" puts in at Funchal, Madeira, for supplies and water. The harbor boat in foreground flies the Portuguese flag.



Boy meets girl on the Sinaia. They are both terribly tired of all the war talk.



At Funchal, Madeira, harbor peddlers try to sell wicker deck chairs to the cramped, impoverished refugees, do no business whatever.



The last view of the European mainland is of Gibraltar, British base endangered by Generalissimo Franco's victory in Spain. German guns now flank it.



The first baby born aboard the S. S. Sinaia is named Susanne Sinaia del Mar.



Backgammon players: ex-Agriculture Secretary Vazquez Humasque and Poet Garfias. The passengers included 400 professional men.



Grand Old Man was famed Madrid journalist-poet, Don Antonio Zozaya, 80.

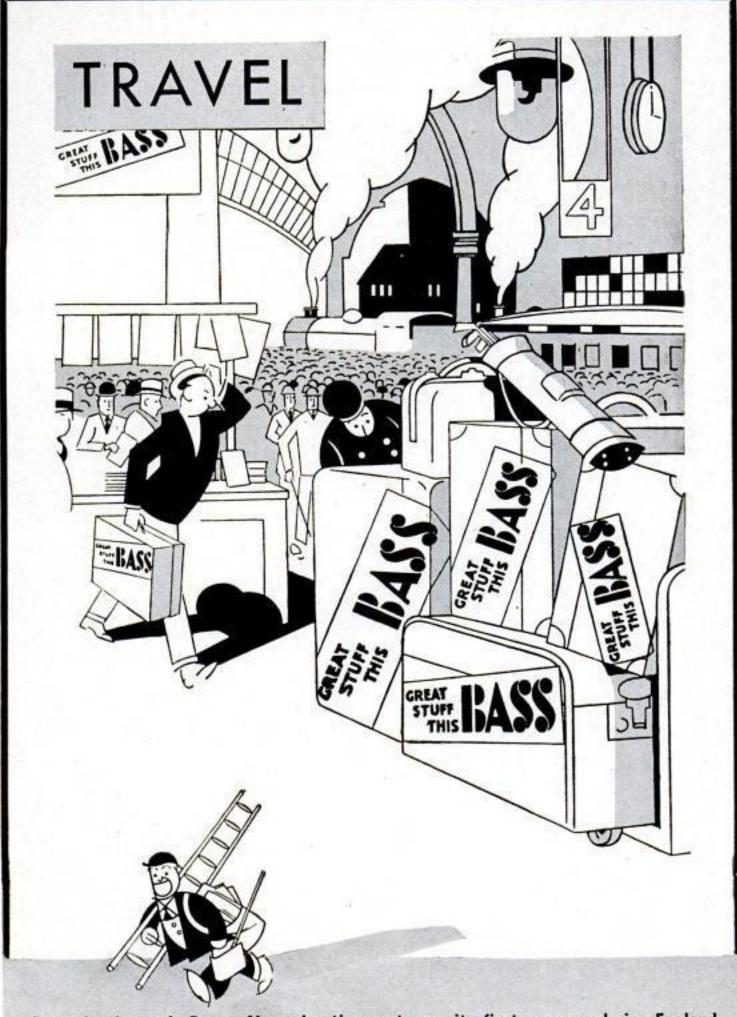


First view of Mexico. Said the refugees, "We shall try to make the Mexicans forget the memory of our conquistador ancestors."



A fearless Spaniard throws himself off a lifeboat into his father's arms. This child has known little but war and privation, is here living dangerously.

CONTINUED ON NEXT PAGE



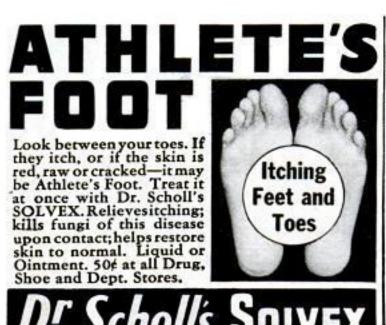
Reproduction of Bass Ale advertisement as it first appeared in England

No matter in what country you travel, you will find the fame of Bass Ale has long preceded you ... and you can buy it wherever fine beverages are sold.

For Bass Ale is decidedly different . . . much as first class passage is different from third. Its distinguished flavor and rich body truly make it "great stuff" with meals-as a nightcap-or as a tall one.



W. A. TAYLOR & COMPANY, NEW YORK-Sole distributors for United States



For those who are alive to the high excitement of our vastly stirring civilization of business. . . .







Arrival in Mexico at dawn of June 13. On the Sinaia, banners (above, left) give vivas for Mexico, Spain, Mexico's President Cárdenas, Loyalist Spain's last Premier Negrin (see extreme right). This week another boatload of refugees is on its way on the S. S. Mexico. Mexico can probably take unlimited numbers of these Spaniards.

SPANISH "ARMY" IN FRANCE (continued)

censorship in all Europe. Whole regions are closed to foreigners. Even if they were not, investigators would not be able to verify killings beyond those announced. Some are executed for terroristic crimes which make the death penalty entirely appropriate, others for merely having participated in the fight for the Republic. The Diario de Burgos on May 10 stated that 400 courts martial were being held daily in Madrid. The United Press on June 13 estimated that executions were taking place at the rate of one every nine minutes.

From the wooden watchtower at Barcarès one can see nothing but straight rows of barracks and intervening strips of sand. The camp is divided into îlots, or sections. Each has its cook room, infirmary, pumps, latrines. There are no beds, only board bunks even in the infirmaries and even for the cripples. The men have nothing to do but stand or lie or sit and, of course, endlessly talk. The main event is dinner, when stew is ladled out of the big iron pots. The cooks are supplied with enough meat and potatoes for one stew a day, also dried peas, dried beans, coffee, sugar, salt and bread.

Argelès, more communal, less military, shelters a number of families and even some livestock. In one of the barracks, crammed with men, women and children, higgledy-piggledy, without any partitions, the writer asked how many separate families were sweltering under that single tin roof. Nobody knew and everybody began counting up; in the end there was still dispute as to whether the number was eight or nine. Outside, an old peasant was urging a pair of bullocks across a stretch of sand, dragging a small log behind a cart, with three or four babies scrambling in and out while a woman (with another baby on the way) looked on indifferently from a low doorway nearby. When the old man got the log across the opening he turned around and hauled it back again.

Some of the intellectuals make pathetic attempts to break the monotony. A weekly typewritten "newspaper," illustrated in crayons, is passed from hand to hand. There are "expositions" of drawings. Chessmen are whittled out of sticks. Professors give lectures. If there were books and more equipment there would be more work and more play. Even so, the May 25 issue of the Argelès Boletin de los Estudiantes told of 12 lectures attended by 1,200 persons, a chess contest with 30 games being played daily, several

poetry recitals, and two classes in English.

"Here we are in a cage"

What kind of men are these who refuse to disintegrate, even after defeat and misery and even facing a blank future? "We fought for liberty, and here we are in a cage," said one, "but the fight isn't over yet." "I am a Catholic, but I thought God would not mind my missing mass while I fought to keep Spain free," said another. "I was an officer of the Monarchy and I was an officer of the Republic, and I kept my oath to each," said a third.

At the start the French thought hopefully of the camps as temporary expedients, and aimed only to provide enough shelter and food to keep the refugees alive until General Franco allowed them home. But the Fascist spirit of revenge shows no signs of abating, and the French authorities have begun to realize that a large number of these people cannot go back to Spain for a long time, perhaps ever. France must place them abroad or prepare to assimilate them at home.

The most promising foreign haven is Latin America. Several thousand already have gone to Mexico. One boatload of 1,800 sailed from a little port near Perpignan the last week in May (see





Premier Negrín (above, right, with glasses) meets the Spaniards at Vera Cruz and Puerto Rican Leftists (above, left) wave at San Juan. The Spanish Republican Emigration Service is under Spain's "shadow government," which still has funds but far from enough to move all the Spanish refugees to Mexico at a cost of \$135 a head.

pictures on pp. 66-67). It was paid for two-thirds by the S.E.R.E., one-third by British committees headed by the Duchess of Atholl and General Molesworth. Incidentally, the port and hour were changed at the last moment, to prevent French Communists who had had nothing to do with the arrangements from staging a demonstration and taking the credit.

Ex-Premier Negrin has been recently in Mexico and has had long talks with President Cárdenas. Their plan is for the ejidos, Mexico's peasant organisms, to adopt 40,000 Spanish families. Peasants and artisans would predominate; but there would be a sprinkling of intellectuals-professors, doctors, artists, journalists-who might be useful in offsetting the totalitarian propaganda now being carried on in Mexico by agents of Hitler, Mussolini and Franco. It still is only a plan. Cárdenas' conservative opponents are of course against it. And Negrín himself doubtless realizes that the first choice is for the bulk of his people to return to Spain. That might become possible if the present discord inside Franco's ranks ended in a monarchist victory over the Falangists. But meanwhile what?

The men in the camps belonged to all the parties of Republican Spain. However, party tenets, even the most dogmatic, wear thin in a world where life is in suspense. At present the refugees are disillusioned about everything and dislike everybody. If the bulk of them stay for the present in France, both Negrin and the French Government will see advantages in restoring their morale. Negrín will have to convince them that the organization he set up to represent them and help them in his absence has operated as efficiently as possible in view of its limited funds. France can remind them that by merely taking them in she saved very many lives, and that even those who would not have been killed at home nevertheless are better off in the camps than in Fascist prisons or at forced labor. This argument would probably work if meanwhile the French authorities had enough imagination to make some inexpensive physical improvements—provide beds for the sick, sewing machines and cobblers' tools for the energetic, loud-speakers to make music in the evenings, and a better balanced diet.

As morale improved, Spanish officers and S.E.R.E. officials might weed out the riffraff who passed over the frontier along with the organized Spanish troops. There would remain at least 150,000 men, most of them veterans, ready for formation into a Spanish Legion under French and Spanish officers. (A start in this direction has already been made with the formation of some labor battalions and by a number of enlistments in the French Foreign Legion.) If Europe were plunged into war, it would not be a negligible force for use in the Alps or (if Franco followed Mussolini and Hitler) on the Pyrenees. Later the legionnaires might be able to go home, or they could be settled in underpopulated regions of France.

The French hesitate, partly for fear of antagonizing Franco further, partly because the refugees are considered "too radical" to trust. But hopes of luring Franco away from the Axis are dying in Paris. And one of the most striking discoveries a visitor makes in the camps is how disillusioned everyone is about Soviet Russia. A few intellectuals and party leaders have gone to Moscow; but, just as with the Jewish refugees from Nazi Germany, Soviet Russia has made no move to take in any considerable number and has not helped with relief.

Actually, unless there is an unforeseen transformation in Spain or a mass movement to Mexico, France has little choice. The refugees cannot remain in their flimsy camps into the winter. They are expensive guests and at present make no return. At this juncture of world affairs, moreover, it would seem sensible to prevent Communist agents from later on being able to picture conditions in the camps, and the fate that subsequently befell their inhabitants, as examples of democratic heartlessness and democratic inefficiency.



MOTOR OIL

Washington Monument



Life goes bicycling

with young socialites up in Maine



BICYCLES ARE TOO GADGETY

According to over-enthusiastic A commentators on the U.S. scene, the sport of bicycling has just started to stage an amazing return to popular favor. This is nonsense. The truth is that bicycling has never been out of popular favor. Over a million bicycles have been sold in the U. S. every year since 1936.

It is true, however, that socialites have lately discovered that

nothing is more fun than bicycling. Most U. S. bicycles have too many gadgets (see inset). Even so, they are enjoyable contraptions, cheap compared to cars, fast compared to feet.

On these pages, LIFE shows a bicycle party staged by twelve energetic young socialites near Augusta, Me. Starting early in the morning, they pedaled out to Lake Cobbosseecontee where they went swimming, had lunch. On opposite page the group is starting out along an avenue of poplar trees leading to the lake.



On Lake Cobbosseecontee, Maine cyclists have picnic lunch of hot dogs, soft drinks and beer. Lake is

min. by car, but a comfortable hour on a wheel.



Tricks are executed by girl cyclist when group rests half way to lake. Her bicycle has many extra appurtenances.



Edward Barrows, son of Maine's Governor Lewis O. Barrows, gets pushed up a steep hill by Jane Murphy.



Puncture is experienced by girl on her way to picnic. Helped by boy friend, she fixes it with "rubber-band tools" in five min.



Lunch and drinks for roadside refreshments are carried in handle-bar baskets, with their bathing suits and bath towels.



Jane Murphy and her friends put on their bathing suits in the woods. Clothes were hung on the bicycle frames.



The Governor's son tosses Jane Murphy in Lake Cobbosseecontee. She was schoolmate of his, is now clerk in State House.

Have you seen the Shamrock that weighs 1200 tons?



Do you know which World's Fair building is constructed in the shape of a shamrock? Perhaps you guessed that one, but can you explain those fantastic Elephant Towers on San Francisco's Treasure Island, which combine mysterious motifs of the ancient Orient with the streamlining of modern skyscrapers?

A 3,000 Mile Picture Panorama that Shows You Both World Fairs Through X-Ray Eyes that See Behind the Scenes

The World's Fair Number of The Architectural Forum brings you more than 200 pages packed with fascinating picture-stories. The only volume to cover both Fairs in one, it brings you \$10,000 worth of vivid, almost-alive pictures by famous photographers...full-color maps...behind-the-scenes thinking of the men who conceived and created both Fairs. You who have been to one or both Fairs will re-live your visits in these pages...will thrill to exciting scenes you didn't know were at the Fair...will own a priceless and permanent record of a never-to-be-forgotten trip. You who stay at home can find here the best of both Fairs in pictures so vivid the buildings seem to leap from the page...so true to life you feel as if you were strolling in their shadows.

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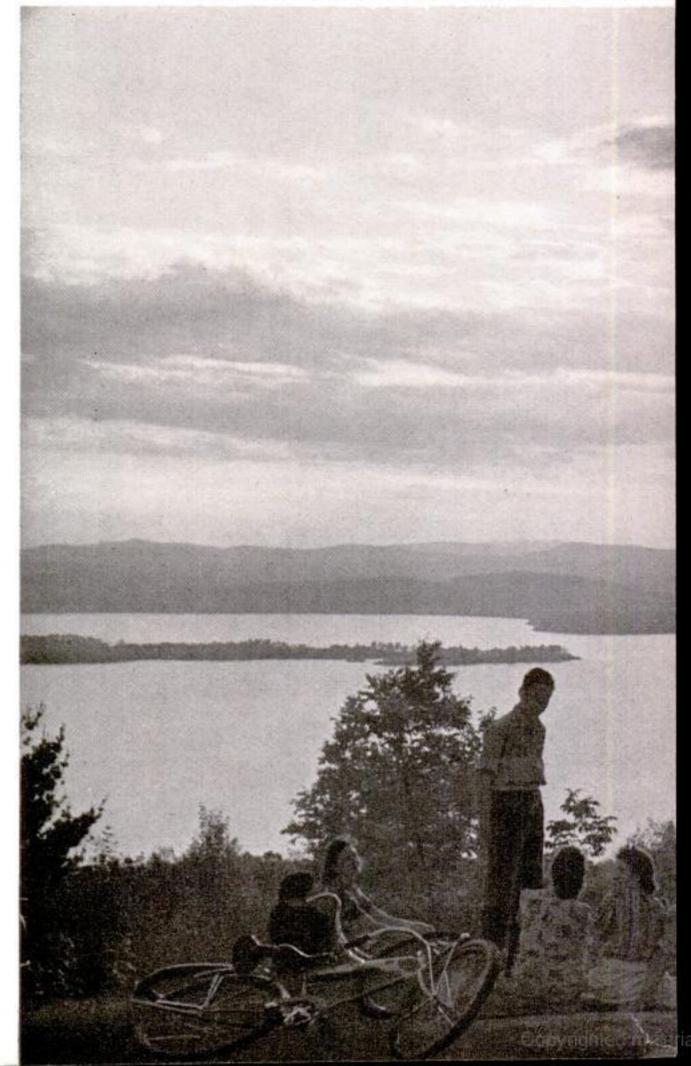
ADDRESS.





Riding through a trackless daisy field is a difficult but extremely pleasant feat. Daisies get tangled in the sprockets, spokes and mudguards, requiring a stop.

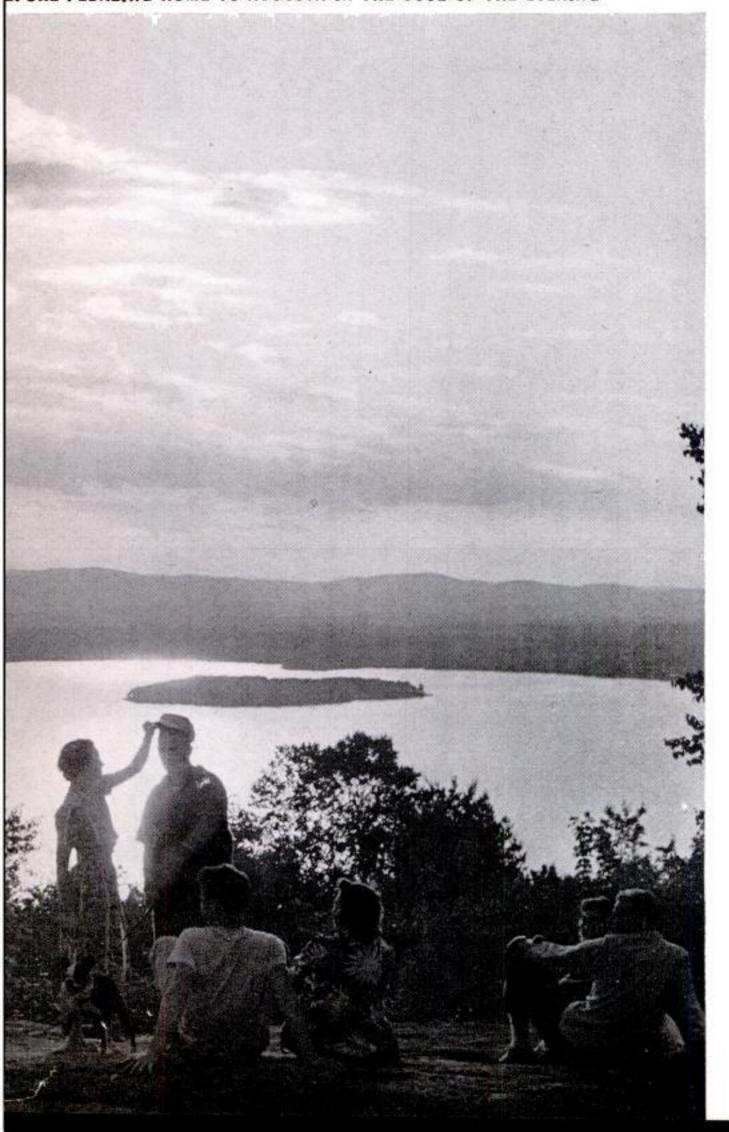
SUNSET OVER LAKE ANDROSCOGGIN IS WATCHED BY CYCLI





"Loves me, loves me not" is played by Nancy Locke and Buck Johnson while sitting on fence at edge of daisy field. Both go to Rollins College. He is visiting her.

EFORE PEDALING HOME TO AUGUSTA IN THE COOL OF THE EVENING





Among these eleven popular Salad Bowl makers taken from Wesson Oil's portfolio are:—

- 1. Irene Castle McLaughlin, of the immortal dancing team—"Vernon and Irene Castle"—says Salad Bowls help her keep slender.
- 2. Neysa McMein, famous portrait painter, who says "Making a Wesson Salad Bowl is easier and more fun than painting portraits."
- 3. Hubert Marty, executive chef, Queen Mary, who says the Salad Bowl is a favorite on this famous Cunard White Star Liner.
- 4. George Rector, famous gourmet and restaurateur, who says the Salad Bowl is the "subtlest, keenest dish of all."
- 5. Mrs. Lowell Thomas, who says her famous husband "always comments favorably on my Wesson Salad Bowl."
- 6. Mrs. Lawrence Tibbett, wife of the Metropolitan Opera star, who serves Salad Bowls at her buffet suppers.

The others, while not so famous, can, like you and me, enjoy the most delightful of all salads — the Wesson Salad Bowl — every day.

Write today to Wesson Oil & Snowdrift People, New Orleans, La., Dept. N, for the booklet "Making the Wesson Salad Bowl" as made by these six famous people.

Ask your grocer today for Wesson Oil. Its fine, delicate flavor will help make you a famous Salad Bowler, too



CLICQUOT CLUB CLUB SODA

50 Years a Favorite



We're Going to Europe ... and it won't Cost Much

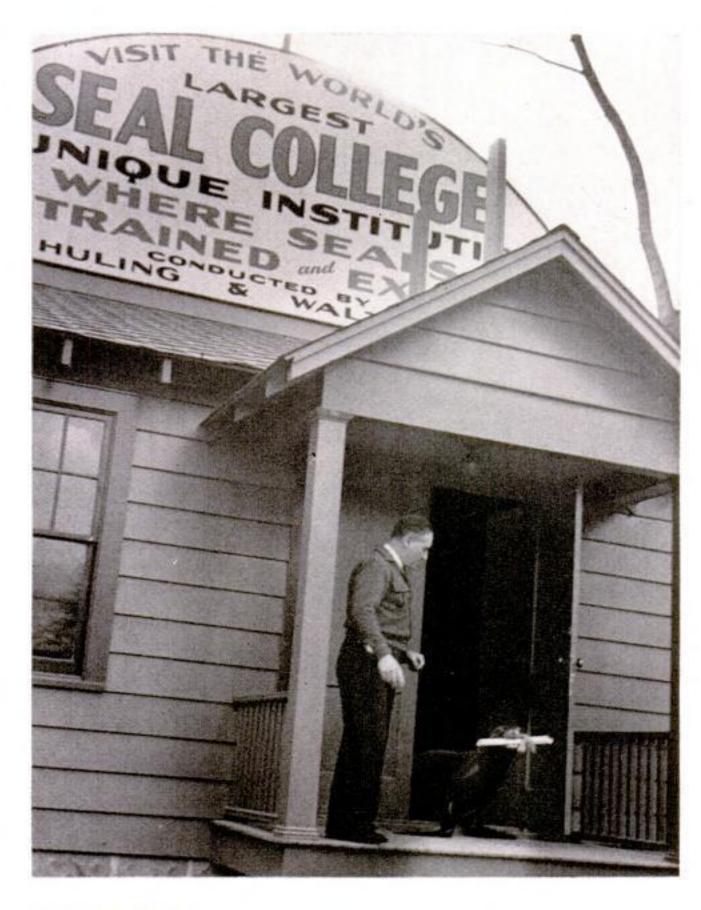
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CUNARD WHITE STAR LOW COST LUXURY LINERS

PICTURES TO THE EDITORS



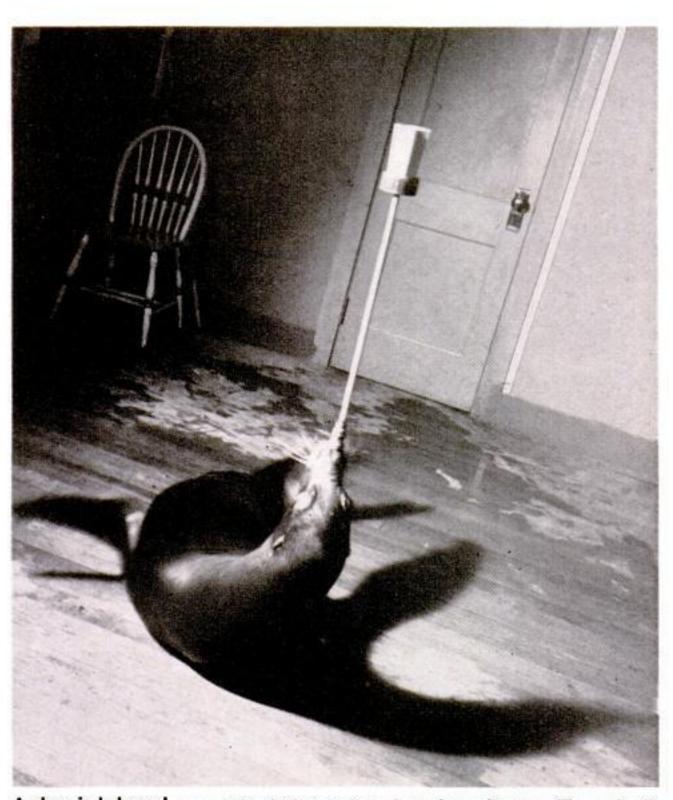
TRAINING SEALS

Seal College is a unique educational institution run by Mark Huling in Kingston, N. Y. Mr. Huling gets young seals from Catalina Island for about \$100 apiece. When they graduate and get

diplomas (see cut above) they are worth from \$2,000 to \$4,000. Once trained, his soggy students have long careers ahead of them, for a seal's life expectancy is from 80 to 90 years.

ALFRED ERISS

New York, N. Y.



A glass is balanced on a stick which is balanced on the seal's nose. The seal rolls over without spilling any water out of the glass. Each seal gets private lessons.

LIFE'S PICTURES



To get the exciting pictures of U. S. cruisers riding out a vicious gale off Cape Horn (pp. 7-9), Bonney Powell, ace Movietone News cameraman, used all his ingenuity. To steady himself and his cumbersome camera in a 50-mile wind, he had two sailors hold down the tripod while two more anchored themselves to his legs. To make matters worse, Powell was seasick, like almost everyone else aboard. With him on the bridge of the U. S. San Francisco (abore) is Admiral Husband E. Kimmel, who said the storm was one of the worst in which the Navy has ever been caught.

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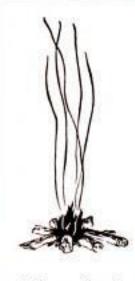
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For generations, Southern women have known the secret of keeping fresh and cool in the warmest weather. Now, Ammen's Powder is fast being "discovered" throughout feminine America, for effective skin protection, comfort, and beauty. Ammen's is antiseptic - absorbs moisture and helps avoid discomforts of prickly heat, sunburn, and other troublesome rashes. Ask for Ammen's, (pronounced AMEN), the final word in powder. TRIAL OFFER: If not obtainable at your dealer's, send dime (in coin) for 10c size postpaid. Address: Chas. Ammen Co., Ltd. Alexandria, La., U.S.A.





KEEP OUR CAMPFIRES BURNING!

For 52 summers the Subscribers and Publishers of LIFE have joined in the common effort of taking little tenement children out

of the sweltering slums of New York and sending them to the country where they can meet Nature on her own terms (most of them for the first time).

This year, when the need is greater than ever, we are coming to you again to ask for your help in carrying on our job.

Please send your contribution to

LIFE CAMPS

TIME & LIFE Building, Rockefeller Center, New York City

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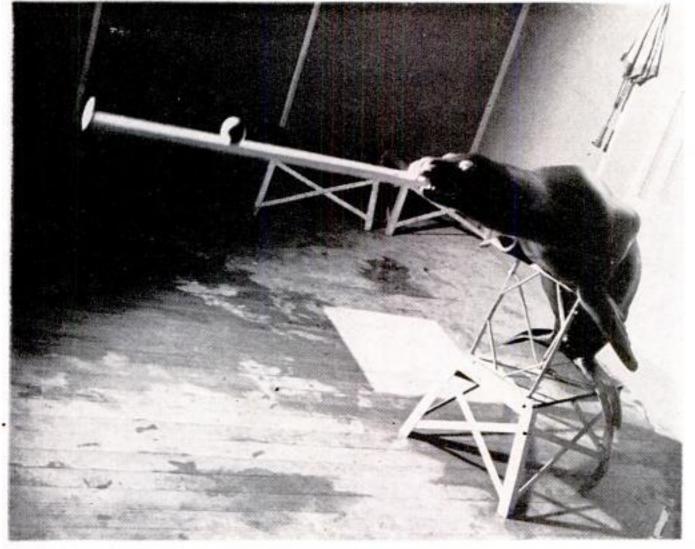
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use Glover's Mange Medicine with systematic
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See what Glover's System can do for you and why it enjoys its wonderful reputation.

FREE booklet on Glover's System for the Scalp and Hair. Address GLOVER'S, Dept. S, 468 4th Ave., N.Y.

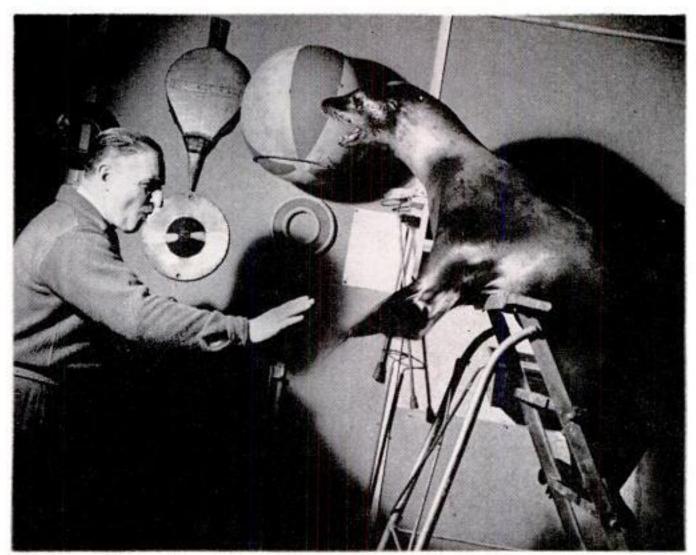
GLOVER'S MANGE



Hardest trick of all is rolling a ball to and fro on a grooved stick. A seal gets an extra bit of fish for this one. Seals are trained for only one-half hour a day.



In the pool a seal balances his ball on his nose while swimming. Seals are naturally amiable. They must never be treated with cruelty, lest they turn vicious.



This seal applauds himself after each trick. Sometimes his self-esteem is so great that Mr. Huling has difficulty stopping him. Seals will not act until they are fed.

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When We're gaun up the hill o'fortune, may we ne'er meet may we ne'er meet a freend comin' doon'



You are invited up the hill with Teacher's . . . to join the ever increasing host of men who say that Teacher's Scotch delights their taste. You will approve the quality they like in Teacher's . . .

It's the flavour



Cool Ingram's cream, of thee I sing for quick relief from shaves that sting!



Give your face that soothing, bracing Ingram's coolness!

UICK as a wink, Ingram's whips up into a glacier of lather that wilts whiskers in double-quick time.

While you shave, that unique Ingram's difference-the famous Ingram's kick-braces your skin. But your big moment comes when you've laid your blade aside! Your face feels COOL and superbly refreshed. Ingram's relieves shaving's irritations, burns and nicks.

Get a thrifty tube or jar of Ingram's at any drug store, today.



PICTURES TO THE EDITORS



SIR WALTER GILBEY

London, England

This is Sir Walter Gilbey, England's fanciest dresser, taking a fence in Hyde Park where he judged a riding display. Sir Walter is turned out in a typical costume including the rollbrimmed topper which he designed himself and a mauve carnation such as he has worn every day for 40 years. Sir Walter is the maker of Gilbey's Gin. He is also the father of a 4-yearold son (Sir Walter is 79) named Anthony Walter, whom you may see at the right.

ERNEST GWYNNE

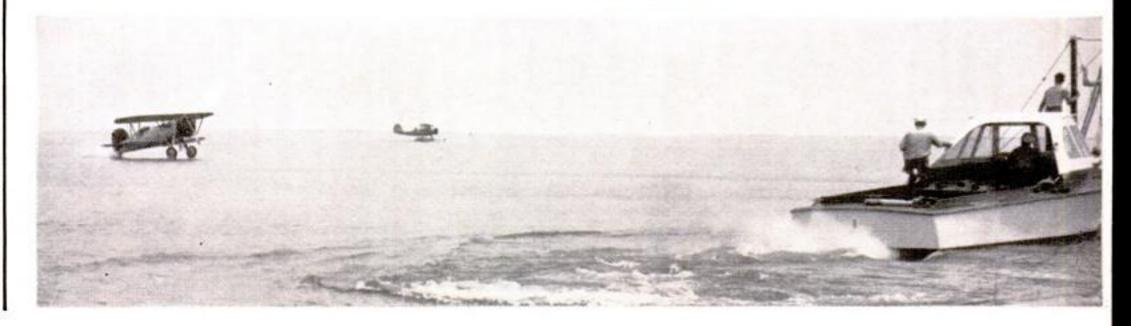
THREE-POINT LANDING ON WATER

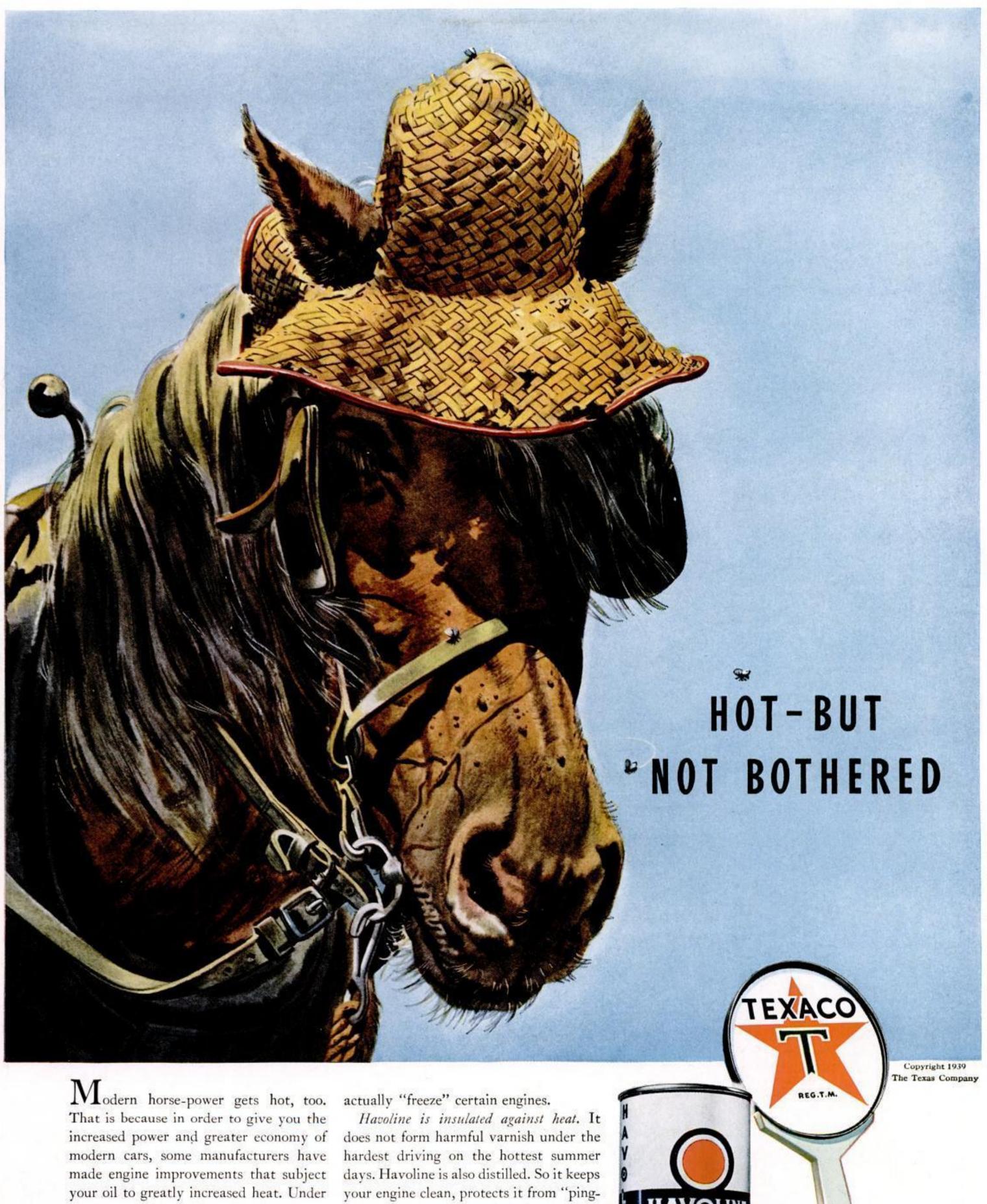
This plane, a Boeing F4B4 fighter, is making a perfect three-point landing-on water.

It happened at the Pensacola Naval Training Station after a student flier "washed out" his landing-gear strut on practice take-offs. An instructor warned the student not to try to bring his plane down on land but to stall it into the waters of Pensacola Bay. The student did it perfectly. Of course the plane did not stay long in this position but it remained affoat and the total damage was a pair of soaked feet.

> HAROLD KEEN Navy & Aviation Editor

The San Diego Sun San Diego, Calif.





these conditions, old-style oil actually forms harmful varnish under hard driving. Varnish that can cause ring-sticking and piston drag-reduce gasoline mileage-

ing" and "knocking" and excessive engine wear caused by hard carbon. Change to Insulated Havoline-at Texaco Dealersit's never bothered by the heat.

SEEING BELIEVING!

Now...circus folks, too, are comparing cigarettes this strikingly convincing way...

"JUST watch 'em burn," is the advice smart smokers are giving on cigarettes these days. At the right, aerial ace Everett White of the Ringling Bros.-Barnum & Bailey circus proves that one leading cigarette burns slower than other brands. The famous star of the high trapeze, Ed Rooney, observes that the winning brand is C-A-M-E-L! Camel's big advantage is in its costlier tobaccos, expertly blended in a cigarette made to burn slowly, completely!

Recently, a group of scientists made this interesting laboratory test on a bigger scale. 16 of the largest-selling cigarette brands were tested impartially. CAMELS BURNED 25% SLOWER THAN THE AVERAGE OF THE 15 OTHER OF THE LARGEST-SELLING BRANDS TESTED—SLOWER THAN ANY OF THEM. (Camels were remarkably consistent. Cigarettes of some brands smoked twice as fast as others right from the same pack.) IN THE SAME TEST, CAMELS HELD THEIR ASH FAR LONGER THAN THE AVERAGE TIME FOR ALL THE OTHER BRANDS.

Camel is the cigarette of costlier tobaccos...always slowburning, cool, mild, with a delightful taste!





SMOKING! BELIEVING!

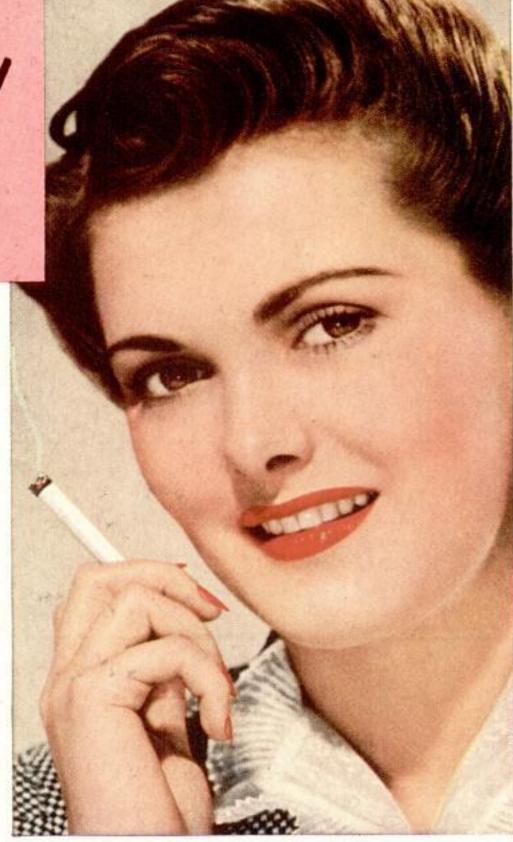
Camel burns! And, say, notice how the Camel ash stays on!"

If you feel that life owes you a little more fun, try a cigarette made with costlier tobaccos...a Camel! See how Camel's delightful fragrance and taste can brighten you up. Camels are amazingly mild. Cool ... easy on your throat ... really a matchless blend.

Camels have more tobacco by weight than the average of the 15 other brands tested. Besides, by burning 25% slower than the average of the 15 other of the largest-selling brands tested—slower than any of them—Camels give you the equivalent of 5 extra smokes per pack!

Camels give you even *more* for your money when you count in Camel's finer, more expensive tobaccos. Buy shrewdly! Buy Camels... America's first choice for a luxury smoke *every* smoker can afford!

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CAMEL

... THE CIGARETTE OF COSTLIER TOBACCOS

PENNY FOR PENNY YOUR BEST CIGARETTE BUY